THE AMERICAN JOURNAL OF CLINICAL HYPNOSIS

JULY, 1961

VOLUME IV, NUMBER 1

THE AMERICAN SOCIETY OF CLINICAL HYPNOSIS

THE AMERICAN JOURNAL OF CLINICAL HYPNOSIS is published quarterly in January, April, July, and October. The volume begins with the July number.

Subscription per year, $6; single numbers, $2. There is a rate of $5 for libraries of non-profit institutions (medical societies, hospitals, and educational institutions).

All manuscripts, books for review, subscriptions, and changes of address should be sent to the Editor at 32 West Cypress St., Phoenix, Arizona.

Contributors need not be members of The American Society of Clinical Hypnosis. Instructions for contributors are on the inside of the back cover of this number. Articles are published without cost to the contributors. A moderate charge is made for reprints if authors order them.

The American Journal of Clinical Hypnosis is published at 407 Ann St., Frankfort, Kentucky. No correspondence should be sent to this address.

Second class mail privileges authorized at Lexington and Frankfort, Kentucky.

The American Journal of Clinical Hypnosis

The official Journal of the American Society of Clinical Hypnosis

---

VOLUME IV, NUMBER 1

JULY, 1961

CONTENTS

THE HYPNOREFLEXOGENOUS METHOD: A NEW PROCEDURE IN OBSTETRICAL PSYCHOANALGESIA[1,2]

Santiago Roig García, M.D.[3]

It is indeed a great honor to present to this Congress an original prophylactic procedure in obstetrical analgesia, which is being used with success.

This work is not concerned with the delivery, to which we refer in "Hypnosis in Obstetrics,"[2] in which analgesia is obtained by suggestion under deep hypnosis; we do not refer to the "hypnosis of vigil" used by Floel in Munich and also Kroger, in which their authority and good "rapport" with the patient were relied upon to obtain analgesia. Neither do we refer to the method used independently by Platonov in Kharkov and Nicolaiev in Kiev in 1923 and a year later by the Viennese psychiatrist Koreger, who, beginning his preparation two or three weeks before the predicted date for delivery, obtained analgesia in a state of vigil after three or four sessions, giving post-hypnotic suggestion that delivery would be painless. We do not speak of Dick-Read's method, based on "confidence, understanding, and lack of fear," nor of the Russian reflexological school's method, procedures by which an adequate conditioning of reflexes was obtained after long teaching and long physical or respiratory exercises. We do not speak of the combinations of these two systems: Dick-Read plus hypnosis practiced by Zdravomyslov, and Ploticher of Velvovski's group, Platonov, and finally Okouniev, who in the Clinic of the First Medical Institute of Pavlov in Leningrad gives an individual personality to the procedure. He offers three primary sessions of the psycho-prophylactic method, followed by five sessions of hypnosis in which he tries to affirm everything said in the previous ones. This combination is recommended among us by Prof. Mariano Díaz and lately by the group from the Private Maternity Clinic of the Vedado, who, deviating from the pure psycho-prophylaxis they were using, combine it today with hypnosis in the original form, adding to the former treatment some sessions for relaxation under hypnosis. They do this in groups, not directly, but by recordings on magnetic tape expertly done by Ar-

[1] EDITOR'S COMMENT: The advancement of an understanding of human behavior does not derive from an adherence to a single body of thought or school of theoretical interpretation, as unfortunately so many insist. The progress of knowledge requires the examination into and perhaps also the ready utilization of parallel, opposed, divergent, and tangential views and understandings. The complexity and variety of human behavior and the deficiencies of existent understandings render imperative the earnest consideration of the findings and theories of all seriously founded systematic endeavors to interpret human responsiveness, both psychological and physiological. Hence, it is with particular pleasure that the two following papers are presented. They are based primarily upon the modern development of Pavlovian psychology, a system which has been generally considered to be of historical interest only in the United States. However, this school of thought has been in development in Eastern Europe, and as a neo-Pavlovian extension and development of the original conditioned-reflexology in Latin America and in Western Europe it is now exercising a most important role in the psychological and psychophysiological thinking of modern scientific research.

[2] This paper and its companion paper, "Hypnosis in Obstetrics," were presented at the Congress of the Pan-American Medical Association in Mexico City on May 5, 1960. They are also being published in Spanish in *La Revista Latino-Americana de Hipnosis Clínica* issued in Argentina by La Sociedad Argentina de Hipnoterapia.

[3] Ave. de la Loma No. 9, Nuevo Vedado F-8018, Havana, Cuba.

mando Álvarez Nodarse, re-using the recordings to maintain a state of hypnosis during delivery.

We are concerned with managing delivery in a state of "vigil," or wakefulness, without the "pain complex of delivery," trying to include here the painful sensations which are produced at different levels and by different mechanisms during delivery. We can do this by the conditioning of reflexes exclusively by previous verbal suggestion under deep hypnosis, without using physical or respiratory exercises and without the patients' having to use any special respiration or to relax in order to obtain analgesia at the moment of contraction.

Nicolaiev, in summarizing papers presented at the famous Congress of Leningrad, said that, thinking as Pavlov, "suggestion is the simplest and most typical conditioned reflex in man," declaring that "these ideas: education, instruction, teaching, and suggestion are identical from the physiological point of view." Pavlov himself points out: "Speech, by virtue of all the past life of the adult man, is related to all external and internal stimuli that reach the cerebral hemispheres, substituting and identifying all, and it is for this reason that the same actions and reactions of the organism which determine those stimuli can be provoked." Also, he continues, "Speech is as real a conditioned stimulus for man as other common stimuli are real for animals, but at the same time, as all-embracing as no other."

The method we propose is based on these concepts; we repeat that while Dick-Read and Velvovski, even when using suggestion, obtain the conditioning of reflexes fundamentally through education, instruction, and teaching, we use almost exclusively suggestion, and to give it more value or penetration, we do it under deep hypnosis, using only words, Pavlov's second system of signs.

We are convinced that in the pain complex of delivery, there is fundamentally a multiple reflex, or, as Rof Carballo calls it, "a biological habit," uterine contraction being equated to pain due to the establishment by hearing and seeing that delivery is painful; and that it is because, as he states very clearly, "the transmission through generations, not of prejudices, but of biological habits, which are passed from mother to daughter almost with the same incorruptible force of the genes." Pain is also aggravated by fear and the emotional tension which delivery itself causes, and which establishes a fear-tension-pain, pain-tension-fear reverberatory circuit. If these factors could be modified, normal uterine contraction should be painless; as Sauter in Zurich in 1956 pointed out, there is no physiological act that is normally accompanied by pain. Aware of the extraordinary usefulness of hypnosis for conditioning reflexes and for modifying those present, for calming tensions and eliminating fear, as we explained in the summary of our previous work, we began to work with our patients. We followed the subtle advice of Erickson, "the most clinically astute hypnotizer of our time," according to Conn, and tried to reach the deepest possible states of hypnosis again and again during the regular visits, trying not only to modify the pain reflex by reasoning that future uterine contractions should not cause more than the painless and pleasant sensation of hardening that other muscles cause on contracting, but also, after reaching complete muscular relaxation, making the suggestions of placidity and calm, breaking all emotional tension and erasing the fear of delivery by explaining that there is no reason for it, that it is a completely physiological act for which a woman is perfectly prepared. This permits the patient to confront delivery with abso-

lute calm and great optimism, a matter of fundamental importance.

The deep sedation of the whole organism which we obtain makes the uterus, as an integral part of it, contract with localized effect, avoiding distention of the peritoneum and disturbance of uterine ligaments where violent contractions and where also painful impulses can originate. Finally, that same general sedation produces a low state of cortical excitability, much lower even than that which is found spontaneously during delivery, which is the amount of its lowest physiological level of sensibility.

We try to exalt maternity and to enliven the emotion which the happy waiting and sublime moment of birth represent, a moment which the patients can fully enjoy because they are conscious. This is a positive emotion which we try to have the patient maintain ardently throughout labor, and which without any doubt whatever also raises the threshold of cortical excitability. Also, momentarily, and in order to favor this block even more during the contraction—which is the moment when more important pain impulses can arise—we try to produce a positive emotion which by activating and raising the tone of the cortex creates a strong momentary concentration of the process of excitation at a determined point. This is a focus of dominant excitation which is capable, by the formation of a zone of inhibition or negative induction, of preventing peripheral pain impulses from reaching the cortex, or, in case of irruption, to avoid their elaboration, thereby inhibiting, weakening, or cutting them off according to the force of the impulse. In order to obtain this positive emotion during contraction, we suggest to the patient post-hypnotically that each contraction should be considered as a very pleasing occurrence or emotion which draws her constantly nearer to the longed-for goal of delivery, because the contraction, we explain to her, is the active or motor element, and thus necessary to achieve the end result.

We also take advantage of post-hypnotic suggestion to obtain complete relaxation of the cervical opening and the perineal floor, which, by avoiding resistance to fetal mobility, prevents the painful impulses which could arise. We take advantage of post-hypnotic effects again to suggest pleasant memories of a happy delivery.

We consider it important not only to administer plenty of oxygen during labor, but also to have our mothers reach delivery with a good index of hemoglobin. In this way they will not only be in better condition to face any hemorrhagic accident and there will be abundant fetal oxygenation, but also we will avoid ischemias and metabolic alterations within the uterine musculature in function, which might result in non-oxidized products of carbohydrate metabolism, causing relative local and general acidosis and thus giving rise to an excitation of the chemoreceptors of the mucous and serous membranes of the uterus.

We differ fundamentally from the classical methods in believing that complete information on the mechanism of delivery could cause a certain disturbance, especially diagrams showing the path of the fetus through the osseous canal and showing the greater vulvar distention and anal protrusion characteristic of the expulsive period. Illustrations of this material we think could give cause for fear and could be of no help, since the mother has no control whatsoever over the bony pelvis. For this reason, we limit the educational part to the presentation of a diagram of the uterus and its contents at the end of gestation, thus satisfying the natural curiosity and permitting them to understand what amniotic fluid is and where it is found and what the membranes are, so that if they rupture

spontaneously or must be ruptured artificially the patients will not be frightened. We insist a great deal on explaining the muscular constitution of the uterus—this is of fundamental importance, because no normal muscular contraction should be painful—and we explain to all primiparas and to those who did not have good dilatation in previous deliveries what the cervix is and how it protects the contents of the uterus during pregnancy and how it must be relaxed during labor to permit the baby to pass through. We explain the process of dilatation, favoring this by vaginal exploration, sometimes done in a somnambulistic state, touching the cervix and perineum in order to localize them and fix them in the mind, so that there will be absolute and complete relaxation of the same. Finally, in cases which have had easy and rapid dilatation in previous deliveries, we do nothing, believing that an optimal "dominant" has already been established.

* * *

The experience we have derived from our cases teaches us that, although the number of sessions of hypno-conditioning given to each case is important, the quality of these is more important; and that we obtain better results when they are spaced prudently and we can reach deep states of hypnosis, especially somnambulistic states. It is important that there be no conflicts which could block the mind during the session. The personality of our patients is also important, as the most favorable cases are those with a strong maternal feeling, an uncomplicated character structure and with the best emotional equilibrium. In this respect the prognosis is similar to that of other methods of psycho-analgesia, so we can say that when the patient has had good relations with her parents, the transfer to us will be good; when her relations with her husband have been good and when the child is wanted, the results are good. When emotional conflicts which vivify tensions or anxieties do not arise at the time of delivery, the results are most satisfactory. We must not forget, in relation to the influence of personality, the words of Rof Carballo when he says: "What an immense number of infantile fantasies act in a large number of women at the moment of delivery—referring principally to hypochondriac personalities with complexes of castration and unsolved cases of edipism weighing upon a physiological act in multiple strata, from unconscious prejudices to the most complete subconscious dynamics; I understood how, not only many unnecessarily painful deliveries but also many abnormal deliveries had to result, unfortunately, from this disastrous elaboration of fantasies and very deep and archaic emotional tensions." Finally, Kline and Guze give much importance to the personality of the patients in that they attempt to evaluate their capacity to receive benefit from hypnosis by means of a test.

In regard to gravidity, more difficulty could be expected in the multipara who has already experienced painful delivery; but in addition to the influence of the hypnoreflexogenous treatment, brevity and ease in the management of delivery are possible through the reiteration of stimuli, or "habituation" as it is called by the neurologists. Thus pain impulses are less likely to arise and their elaboration and perception are more difficult, and the results are more impressive. Even with patients who previously had anesthesia and, confronted with doubts and fears, ask for it, we can administer minute doses which would have no action whatsoever under normal conditions, and with which they are entirely satisfied and quiet. In these cases we take advantage of the firmly established idea that pain is suppressed by anesthesia. It would be difficult to

argue this; therefore, we utilize it to our own benefit, giving confidence by offering everything they want or need. You will be able to see, from some of the case histories presented, that in some cases we place the mask for Trilene connected with a V-tube to a cylinder of oxygen and to the bulb of Trilene which we keep closed or open very slightly — one or two lines — and the patients are satisfied, although they have received practically none of the gas. In regard to gravidity, then, our observations agree with the results obtained by other methods of obstetrical psycho-analgesia. Tupper of Halifax, using Dick-Read's method from 1950 to 1954, on a basis of 2000 cases, had better results with multiparas than with primaparas: excellent in 46.5% multiparas and 19.7% primiparas, with 7.2% failures in the former and 8% in the latter.

In relation to the length of time of labor, we cannot offer statistics, due to the difficulty in ascertaining the exact time of its beginnings. However, we can say that there was only one case of rapid and violent delivery, as the uterus does not break the harmonious sedation of the organism, and delivery not only tends to take place at a later date than expected, but the initial period is prolonged, since, as we do not activate this stage, deliveries are not outstanding for their rapidity. The only cases that we have had difficulty with in dilatation resulted from specific causes. Ordinarily dilatation is facilitated by the treatment, which then permits a rapid end to labor if we activate the dynamics.

There are two facts that we should point out in view of future observations. Among patients whose previous deliveries had been managed very satisfactorily under simple hypnosis and who were now treated by this procedure, we found two whose results were so favorable that even though insufficiently prepared, they had not realized how advanced labor was when we examined them, as seen in case histories 461 and 593. There was another with whom we had only partial success, even though the treatment seemed perfect and we had anticipated the best results (case history 603). This was due, we think, to the alteration of the normal course of labor caused by the fact that induction of labor was necessary, which occurrence leads us to believe that in labor any alteration from the normal, and especially its being forced, is incompatible with the entire success of the treatment.

The low excitability of the cortex obtained by the deep psychological sedation of the organism, the abolition of that negative emotion which is fear of delivery, and the substitution by the contraction of the pain response constitutes the tripod on which our method sustains itself fundamentally. With all the complementary and complex mechanisms described, we can attain by the end of gestation the blocking to a greater or lesser degree of each one of the factors which constitute the pain-complex of delivery, and as a result, in cases where we get a complete blocking of these, we obtain a uterine contraction that is no more than a feeling of hardening of the abdomen, accompanied by complete optimism and placidity. This is true to such an extent that, even when we told the patients they would feel no pain, several of them have called us, doubting that they were actually in labor when the only symptoms were the contractions manifested by periodic hardening of the abdomen. In those cases where we did not obtain a complete blocking of pain, this is so distributed that it is felt mainly toward the level of the sacrum as a discomfort similar to that of menstruation. The contraction itself is painless, as in the abdomen itself only when the aforementioned sensation of hardening is felt. The lumbar

discomfort that is sometimes felt, usually in primiparas, we have occasionally suppressed by hypnotic anesthesia in that area, and it always ceases spontaneously when dilatation is complete. During the expulsive period, all the patients feel a keen desire to defecate, which makes us think that when the aforementioned discomfort arises, it comes from reflexes which originate at the level of the uterine orifice and that it could possibly be relieved with antispasmodics or small doses of analgesics.

Similarly, as in the cases of delivery under simple hypnosis described in our previous work, the babies delivered by the hypnoreflexogenous method are characterized by the equilibrium of their nervous systems. Mothers often report that their babies do not have restless nights. We said before and we re-affirm now, that "if these babies enjoy the best maternal-filial relations because they are the products of deliveries which are pleasant memories for the mothers — of fundamental importance for the future evolution of the psyche—if they, with the passage of time in a favorable environment, continue to show a better emotional equilibrium, there will be no doubt that we obstetricians have done our part toward the betterment of the human race. With this we may achieve for our sons happier lives, free from so many conflicts brought on by those who were yesterday excited and irritable babies and who today are maladjusted men." This fact should not be surprising if we take into account that Hellman, already influenced by the ideas of Schultz, becomes interested in the psychological factor in obstetrics, alluding to the "intra-uterine" education of the child, and the influence of the state of mind of the mother upon the fetus, for which reason, he says, acting on the mother we can presumably effect alteration of fundamental fetal psychological patterns.

Although we have no proofs to enable us to determine exactly the mechanism of production of these effects upon infants, we think that may be due not only to hypnosis in itself, but also to the sedation resulting from it. By suppressing the mother's fear and emotional tension we avoid the production of neuro-endocrinological substances which, acting upon the fetuses, could, through the neuro-hormonal mechanism, explain the effects we have described. This would agree with what Vermorel said in his work, pointing out that Soviet authors have demonstrated by dosimetries made of adrenalin, acetylcholine, and histamine, that these products are maintained in very weak proportions in cases of delivery by the psycho-prophylactic method, while there is an evident increase in them in a painful delivery. Thus we could also deduce that during the period of gestation there might be different levels of these and other constants, such as noradrenalin, according to whether or not the patients are under tensions and fear. In defense of our theory also, we can see how Tupper, referring to Dick-Read's method, which also suppressed fear and anxiety, although by procedures different from ours, declares: "The babies born through a natural delivery are the most beautiful, breathe and cry the most spontaneously, and are the least irritable and the happiest." He closes by saying, "there are fewer rebellious and difficult babies." Sontag, studying intra-uterine influences on the fetus, points out that an emotional state of anxiety or chronic fear in the mothers tends to increase the activity of the fetuses, which later become irritable and restless, with a resulting muscular tension during birth and a tendency to diarrhea and intolerance for feeding. This author says: "It is possible that a greater or smaller number of the permanent behavior characteristics are established during the prenatal period."

He believes that adverse conditions, such as intoxication or anoxia in the prenatal medium, could not only cause an individual who would have had a genetic potential for an intelligence quotient of 120, to have one, for example, of only 110; but also could determine modifications of a permanent nature which later might alter the behavior of the individual. This might include the function of the nervous system or other organs, it being possible to suppose that the reaction of the individual in later years to emotional situations could be different if the supply of oxygen during fetal life had not been diminished. Deutsch, referring to anxiety, says: "Knowing what a powerful influence a pre-existent unconscious anxiety in the mother can exercise upon the physiological phenomena of pregnancy, we must suppose that the same dynamic forces will also influence that part of the maternal body called the fetus." Greenacre speaks of "fetal anxiety," saying that, if excessive, it could cause the child to be constitutionally predisposed to neurotic conduct. This concept, we should state, is not in agreement with ideas previously maintained by Freud. Fries considers the form of activity of the fetus as a result of inherited characteristics and of the effects of uterine life and birth. Finally, so great is the importance of intrauterine influences upon the fetus for some authors that Stockard declares: "The biologist knows very well that the most important part of the life of a man has already passed at the moment of birth."

Results obtained are illustrated by reviewing some of our typical case histories:

Case 1

H. C. 386: Gravida I, 32 years of age, was seen on the afternoon of January 27, 1959, for her fifth session of hypnosis. Because slight contractions had been noticed, a vaginal examination was made, which showed an obliterated cervix with bloody discharge. She was admitted the following morning because of continuing painless contractions and mucus discharge. At 9 o'clock there were 3 cm. of dilatation. An amniotomy was done, and the patient conversed quietly with her relatives. At 10:30, with 7 cm. dilatation, she continued talking, while her husband took photographs. She was hypnotized to take her to the delivery room, where oxygen was administered, adding only two lines of Trilene at the moment of expulsion. Under usual conditions this amount could have had no analgesic effect. No pain was felt throughout labor and delivery, which took place at 11 a. m. The baby has had no restless nights.

Case 2

H.C. 390: She had vomited throughout her three previous pregnancies with serious effects on her general condition. This was controlled by hypnosis done in several sessions during the two times she was hospitalized. She had felt contractions since early morning, but had attended to her children, leaving them at school, and was admitted on June 9, with the cervix obliterated, the orifice dilated to 4 cm. and with completely painless contractions of moderate intensity. An amniotomy was done. Shortly afterwards the contractions became frequent and stronger, and she was put under deep hypnosis and taken to the delivery room. She was given oxygen only, even during expulsion, and an 8½ pound baby was delivered at 8:55 without any pain. There was no episiotomy. Her husband stated that, in spite of the previous complicated pregnancies, what worried him most in thinking of the new baby was the sleepless nights they had had with the others. In this case, he said, no one would have known there was a baby in the house.

Case 3

H.C. 545: Para III, 30 years old. She was seen at 9:00 a. m. on August 27, having had light, painless contractions since early morning. Upon examination there were 5 cm. of dilatation. An amniotomy was done. At 10:45 a. m. light contractions continued, for which 0.15 gm. of Espartein was administered, and the patient was hypnotized shortly afterwards to take her to the delivery room. There only oxygen was administered, and an 8-pound fetus was delivered at 11:30 a. m. without any pain, in spite of the fact that previous deliveries had been very painful. The mother stresses the extraordinarily greater placidity of this baby than that of her older children.

CASE 4

H.C. 542: This primapara of 39 with six previous currettages was seen at 3:00 a. m. on September 7 with irregular contractions, fairly strong and painless. The cervix was fibrous, with several nodules, and was unable to dilate. Although we believed it difficult to solve this problem, the condition of the patient and the fetus being satisfactory, we tried by giving 50 mg. of Meperidine with 26 mg. of Chlorpromazine intramuscularly to help dilatation, and the patient slept the rest of the night. At 9 a. m., in spite of the strong contractions that continued to be painless, the cervix remained the same. Abdominal delivery was considered indicated because of a finding of some meconial fluid, which suggested that the test labor had been carried to the limit. Hypnosis was used as pre-anesthetic for the cesarean section. Due to the resistance of the uterine orifice, it was impossible to dilate it during the operation, and afterwards we had to dilate it vaginally by means of instruments to insure proper drainage of the lochia. In spite of our having interrupted the equilibrium, because of the struggle with the insuperable obstacle of the cervix, the patient felt no pain. The baby showed no irritability.

CASE 5

H.C. 461: After having had her first two deliveries under Trilene, we had managed the third under simple hypnosis, without previous preparation and with complete success as can be seen in case history 211, summed up in a work cited in the bibliography of this report. For this we had five sessions, with the result that shortly after midnight on September 8, 1959, she called to say she doubted that she was in labor but that she had had periodic painless contractions. She continued in a state of vigil or wakefulness until expulsion of the fetus at 4:06 a. m. She states that she had felt only an uncomfortable sensation of vulvar distention at the moment of delivery. She received no drugs, and no hypnosis was used during labor or delivery. The baby, as was the foregoing one, was also very quiet.

CASE 6

H.C. 462: Primipara of 25. The membranes ruptured prematurely in the early morning of October 11, at slightly more than 8 months' gestation with an immature cervix. She spent two days with irregular and painless contractions, and was delivered on the morning of the thirteenth by means of a venoclysis of Releasin. The baby, she says, only cries when hungry, sleeping day and night. We surely would have had to do a cesarean in this case if the patient had not been free from pain and able to rest normally during the two days of labor.

CASE 7

H.C. 524: After a previous delivery under Trilene, we used the hypnoreflexogenous method this time. A little after 8 months she developed uterine hypertonia and generalized pruritus without apparent cause, which resisted all treatment, including hypnosis. She had had this pruritus at the end of the previous pregnancy, and it re-appeared in conjunction with stubborn pre-delivery contractions, and the two symptoms caused great discomfort and exhaustion. Real labor began two weeks after the appearance of these problems, when she was operated on because of the poor condition of the fetus; the cord was found misplaced. In spite of six sessions of hypno-conditioning, she had pain and considerable excitation at the beginning of labor which we attributed to the tension and exhaustion produced by the above symptoms. The pruritus was so intense that she had lesions from scratching. These disturbances may very well have been due to some emotional conflict which had been previously overcome in order for us to succeed with the treatment. Although we could not use hypnosis because of the urgency of the operation, and although this is the only case up to the present of failure of our method, since excitation and pain were apparent from the beginning of labor, the baby has the same characteristics of quietness as the others, crying only when he defecates due to constipation because of megacolon. The mother states that in spite of this abnormality he is much quieter than the older child and that he is perfectly healthy.

CASE 8

H.C. 564: This was a patient 30 years of age, in her second pregnancy. Her first delivery was characterized by extreme excitation, lack of co-operation, and cries let out upon every contraction in spite of pure Trilene with the valve wide open. After six sessions, she was seen in frank labor, with 4 cm. of dilatation, membranes ruptured, and good regular contractions which had begun shortly before. Even though she said she had very intense pain, this was not at any moment accompanied by any gestures confirming it, and even during examination, for which she was quiet,

we could distract her during a contraction without her showing the slightest expression of discomfort or suffering. She was put under hypnosis to be taken to the delivery room, where she was delivered of an 8½ pound baby at 1:00 a. m. The mask for Trilene was applied, with the valve closed, only for the psychological effect, and with previous hypnotic anesthesia of the vulva and perineum an episiotomy was done while in a state of vigil, using local anesthesia for the episiorrhaphy. The next day she admitted that she had felt no pain, and she was unaware at the moment that we had done an episiotomy. The baby has the same characteristics of quietness that we have commented upon before. Of all the cases treated, this is the only one that showed great uterine activity right from the beginning of labor.

Case 9

H.C. 504: Hypnosis was used in this case while she was in the hospital at the beginning of pregnancy for the treatment of vomiting, which then ceased completely. After eight hypno-conditioning sessions, she was seen on the night of November 18 with 3 cm. of dilatation and with painless spaced contractions. She was given 50 mg. of Meperidine, and she slept in spite of continuing contractions. At 8:45 the following morning, after a shower and the usual breakfast, she had 5 cm. dilatation and painless contractions of medium intensity, which permitted her to talk with her family, who could not believe she was in labor. With almost complete dilatation, she was put under hypnosis 15 minutes before delivery in order to take her to the delivery room. By means of hypnotic anesthesia of the right arm, Pitocin was administered in venoclysis to facilitate the expulsive period and to assure the posterior contraction of an inert uterus. As the needle came out of the vein, the same type of anesthesia was done on the other arm, so that Dr. Raúl Porro could introduce a trocar. Finally, and also by means of hypnotic anesthesia of the vulva and perineum, we did an episiotomy, and brought her out of hypnosis through suggestion at the moment of expulsion. Although we usually use local anesthesia for the episiorrhaphy, because we feel that the immediate post-partum period is not the opportune moment for hypnosis, especially as it has no real value then, we decided to test the efficiency of our method, to satisfy Dr. Porro. We again used hypnotic anesthesia of the region for suturing. Even though we offered the patient Trilene from the beginning, as she had a very painful memory of a previous delivery in which anesthesia was given only at the moment of expulsion, she did not take the mask until the end, and, as the valve was closed, she received only oxygen. The report on the baby is entirely satisfactory.

Case 10

H.C. 499: We referred to the first delivery of the patient, which we consider extraordinarily interesting, in our first work, summarizing H.C. 267. We had complete charge of this pregnancy, giving the patient 12 sessions of the usual treatment and also trying to erase the reflex pattern which had been previously established. Shortly after the date due for delivery, we separated the membranes and stimulated the beginning of labor by hypnosis. Late in the afternoon weak contractions began. She was able to attend a performance of ballet, sleep normally, and perform her usual morning duties. That afternoon she came for examination, and we found she was having good contractions every five minutes, absolutely painless, and the dilatation was 5 cm. As the membranes were intact and we know these labors are slow if not stimulated, we let her go home for lunch and a nap, advising her to be admitted as soon as the contractions became more frequent or if there were any discharge. When she came in at 3:30 p. m., she was having contractions every three minutes. An amniotomy was then done, and she was taken to the delivery room. Spontaneous delivery occurred with local anesthesia for the episiotomy, since hypnosis was felt to be unnecessary. The patient commented that the only thing that bothered her had been the injections for local anesthesia of the perineum. Moreover, as soon as the episiotomy had been sutured, she got down from the table, went to the nurses' room to fix her hair, and with her baby in her arms walked back to her room. The only drug used during labor and delivery was the novocaine used for local anesthesia.

Case 11

H.C. 593: Her previous delivery had been managed under simple hypnosis with complete success. At term she came to the office, because she "felt a little strange," waiting until she could be seen. Upon examination we found good contractions and almost complete dilatation. We took her directly to the delivery room, where she delivered immediately after the amniotomy was done. No hypnosis or drugs were used.

CASE 12

A previous delivery had been managed under direct hypnotic suggestion with great success. After careful preparation with 15 sessions of hypnoconditioning on several occasions being carried to a somnambulistic state, we found we had to induce labor because she was overdue. We used tablets of Inductenca, a drug containing ergonovine maleate and quinine chlorohydrate, after which we finally delivered her. This delivery, however, was different from those described as typical for the method, because, after the inductive treatment in the morning had failed, an abrupt labor began during the night, with violent and frequent contractions which became painful and which concluded the labor in 1 hr. 50 min. Almost at the end, when the contractions could be controlled with antispasmodics and the dilatation completed, the contractions became absolutely painless, and the patient was completely quiet during the expulsive period, chatting with us, without drugs, without pain, and feeling so well that she walked out of the delivery room carrying her baby, according to our usual procedure.

CASE 13

H.C. 639: This patient was a Gravida I, with 12 sessions of hypnoconditioning. The membranes ruptured two weeks before the due date, and after telephonic consultation she continued sleeping the rest of the night, since the painless contractions did not bother her. She was examined at 10 a. m.; the cervix was almost obliterated, permitting the introduction of our fingers. She was admitted at 3:30 p. m. with absolutely painless contractions every 4-5 minutes and with 4-5 cm. of dilatation. She was delivered at 6:20 p. m. by the midwife on duty, since we were out of the hospital at the time. In spite of this, there was no pain or fear, because of the firmly established conditioning. We consider this case of great interest, because it demonstrates an important difference between the results obtained here and those obtained through the psychoprophylactic method, which requires fundamentally the presence of the doctor and assistant in kinesthesia during delivery because of the influence they exert through the "rapport" established with the patient. No hypnosis or drugs were used.

CONCLUSIONS

1. We review the procedures for obstetrical psychoanalgesia used up to the present, summing up the bases of each in order to point out the differences between them and those of the proposed method which we consider original.

2. Our method is based on the suppression of fear and tension which delivery causes and on the modification and conditioning of new reflexes, all this through the exclusive use of words, Pavlov's second system of signs, under deep hypnosis.

3. We use the term "hypnoreflexogenous" for this method, because we consider that it gives an exact idea of its basis.

4. Through our procedure we obtain in most cases, especially in multiparas, completely painless deliveries. In a few, especially primiparas, there are lumbar discomforts similar to those of menstruation during contractions while this period of dilatation lasts. In all cases, once this period is over, the patient feels only a strong desire to defecate during the expulsive period, thus contributing actively with the abdominal muscles to the rapid end of labor.

5. To differentiate this procedure from delivery under simple hypnosis, which is an analgesic method, ours is a procedure in which pain prophylaxis is carried out.

6. The method can be used by any obstetrician, as it is simple and requires only moderate ability, and instruments or special hospital equipment are not required.

7. As the first stage of labor is greatly lengthened and as the patient does not suffer, there is less urgency and more relaxation, enjoyed as moments of leisure.

8. The prolonged first stage of labor is probably due to the psychological sedation of the uterus. Since the entire organism has not been depressed by drugs and receives a good supply of oxygen, it lends itself to a better func-

tioning under any kind of stimulation. As the uterine orifice, except in specific cases, does not offer resistance because of the treatment itself, we obtain a rapid final stage at the most opportune moment.

9. As it is not necessary to hypnotize the patients during labor, and as they have no pains or worries, they spend the hours of labor chatting with relatives. This is pleasant for them and convenient for us, not having to be in constant attendance.

10. Through hypnosis, with a minimum of our time and no effort on the part of the patient, we can eliminate fear, tension, and the pain complex. This required long sessions of instruction and physical or respiratory exercises in the methods of Dick-Read and Velvovski. We can obtain a more solid modification and conditioning of reflexes than by previous procedures, without the necessity for special surroundings or hospital organization.

11. Our treatment does not harm physically either mother or child, nor are there any periods of excitation or delirium or other discomforts as with certain anesthetics. The delivery can be managed quietly and placidly, leaving an agreeable memory for the patient, who can then face her next pregnancy with confidence.

12. The uterus is ready to react in the best way to any stimulation; and the mothers always co-operate actively, being completely conscious in some cases, or in close relation with the operator when we put them under hypnosis for the expulsive period (a procedure which was used when this method was initially developed, but which has been abandoned at present.) We now believe it unnecessary, since we have demonstrated repeatedly that when dilatation is complete, the patient will not feel pain during expulsion, but only the sensation of defecation. Thus we can avoid the use of forceps, which is routine with anesthetized patients and in instances in some unanesthetized cases when there are bad dynamics or lack of active cooperation.

13. The mother finishes labor in a rested state, which gives her greater resistance to sepsis and obstetrical shock. She can move about immediately, avoiding vascular complications, and can have a regular diet. She can enjoy the postpartum state and she carries her baby in her own arms to lay it, symbolically returning the wedding coins, in the arms of a loving husband, who is waiting to see the final fruit of their union.

14. The mother really feels she has given life to her child, seeing him and enjoying him from the moment of birth, which together with a pleasant memory of delivery, makes for the establishment of the very best maternal-filial relations. The child receives the greater benefit from this, obviously, and this is an excellent basis for his future psychic development.

15. The babies, who have received abundant oxygenation through the mothers and have not been depressed by drugs administered as an anesthetic, do not suffer from the anoxia that anesthetics sometimes cause: the best guarantee for future mental health.

16. The babies show a definite emotional quietude, which brings us to the conclusion which we consider of the greatest importance among all the benefits offered by this method: that they are the ones who are starting life and it is our duty to give them the greatest possible advantages.

17. The effect of this method on the babies has been observed in cases managed by the hypnoreflexogenous method which have, or have not, received hypnosis at the moment of delivery or cesarean, whether or not oxygen has been administered, and even in cases

where there have been slight symptoms of fetal harm.

18. The common factor in all the cases is hypnosis, with which we always erase anxieties, fears, and tensions. Thus we have every reason to conclude that the sedation obtained is the basic factor in producing that most beneficial result.

19. Due to the fact that this treatment is very new, we are unable to report at this time how cases treated by the hypnoreflexogenous method will behave in subsequent deliveries if no new treatment were given.

20. The hypnoreflexogenous method is not a procedure for solving problems of abnormalities, nor can it maintain absence of pain in alterations in the normal course of labor, especially if labor is forced. The greatest success is obtained in the most normal persons, patients who are free from serious conflicts, who have good parental and marital relationships, who have strong maternal feelings, and who can reach the somnambulistic plane in hypnoconditioning sessions.

SUMMARY

We describe here a method, which we believe original, for obtaining delivery without fear or pain, based on the conditioning of reflexes under deep hypnosis. In this method only a verbal therapeutic method is used, without utilizing the practices of either physical or respiratory exercises. Hypnoconditioning sessions in the periodic visits of the patient during pregnancy allow us to conduct labor in a nonhypnotic state, due to the pain prophylaxis already used. We also point out the remarkable relaxation and emotional equilibrium observed in the babies delivered by this method, explaining the possible mechanism. The characteristic course of these deliveries is described, illustrated by case histories which outline and demonstrate our method of procedure.

REFERENCES

1. Bauer, A. *Aportes a la práctica del parto sin dolor.* Buenos Aires: Editorial Cartago, 1957.
2. Chertok, L. *Los methodos psicosomáticos del parto sin dolor: historia, teoría, y práctica.* Madrid: Editorial Científico-Médica, 1958.
3. Conn, J. H. Hypnosynthesis, hypnosis as a unifying interpersonal experience. *J. nerv. ment. Dis.*, 1949, **109**, 9-24.
4. Deutsch, H. *An introduction to the discussion of the psychological problems of pregnancy. Problems of early infancy.* New York: Josiah Macy, Jr., Foundation, 1948. Pp. 16-17.
5. Dick-Read, G. *Introducción al parto sin dolor.* Buenos Aires: Editorial Central, 1959.
6. ————————. *Parto sin dolor. Teoría y prática del parto natural.* Buenos Aires: Editorial Central, 1956.
7. Erickson, M. Seminar on hypnosis. Los Angeles, 1953.
8. Floel, O. Schmerzlose Entbindung in der Privatpraxis. *Münch. med. Wschr.*, 16 Dec. 1921, p. 1623.
9. Freud, S. *The problem of anxiety.* New York: Psychoanalytic Quarterly Press, 1936.
10. Fries, N. Psychosomatic relationship between mother and infant. *Psychosomat. Med.*, 1944, **6**, 159-162.
11. Gavensky, R. *Parto sin temor y parto sin dolor.* Buenos Aires: Al Teneo, 1958.
12. Goodrich, F. *Maternidad sin dolor.* Barcelona: Editorial Daimos, 1956.

13. Greenacre, P. *The predisposition to anxiety in contemporary psychopathology.* Cambridge: Harvard University Press, 1944.

14. Hellman, R. *Der psychische Faktor in der Geburtshilfe.* (Communication à la semaine psychothérapeutique de Lindau 1955.) Stuttgart: Thieme. Pp. 31-43.

15. Hernández-Peón, R., Scherrer, H., and Jouvet, M. Modification of electric activity in cochlear nucleus during "attention" in unanesthetized cats. *Catholic Sciences,* 24 February 1956, **123**, 3191, 331-332.

16. Kline, M., and Guze, H. Self hypnosis in childbirth: A clinical evaluation of a patient conditioning program. *J. clin. exp. Hypnosis,* 1955, **3**, 142-147.

17. Kogerer, H. Die posthypnotische Geburtsanalgesie. *Wien klin. Wschr.,* 1922, No. 23, 513-517; No. 24, 538-540; No. 25, 558-561.

18. Kroger, W., and De Lee, S. The use of the hypnoidal state as an amnestic, analgesic, and anesthetic agent in obstetrics. *Am. J. Obs. Gynec.,* 1943, **46**, 655-661.

19. ————, and Freed, S. *Ginecología psicosomática con inclusión de algunos temas de obstetricia.* Editorial Salvar, 1955.

20. Le Page, F., and Langevin-Droguet, G. *Preparación para el parto sin temor.* Madrid: Editorial Paz Montalvo, 1958.

21. Nicolaiev, A. *Conclusion.* In: Congress of Leningrad (76), 175-178.

22. ————. Hypnose en obstétrique et en chirurgie. *Kazanskii med. J. (USSR),* 1926, **1**, 50-54.

23. ————. *El parto sin dolor.* Buenos Aires: Editorial Cartago, 1957.

24. Pavlov, I. *Los reflejos condicionados. La función de los grandes hemisferios.* Mexico: Ediciones Pavlov, 1942.

25. ————. *Los reflejos conditionados aplicados a la psicopatologia y psiquiatría.* Montevideo: Ediciones Pueblos Unidos, 1955.

26. Platonov, K. *La palabra como factor fisiológico y terapeútica.* Moscow: Ediciones en lenguas extranjeras, 1958.

27. Quijada, H. *Consideraciones psicoanalíticas sobre partes distócicos. Un enfoque psicoanalítico del parto sin dolor.* Madrid: Editorial Paz Montalvo, 1957, p. 42.

28. Rof Caballo, J. *Patología psicosomática.* Madrid: Editorial Paz, 1950.

29. Roig García, S. Hipnosis en obstetricia. Mexico City: Congreso de la Asociación Médica Pan-Americana, May 1960.

30. Sauter, H. Bekämpfung des Geburtsschmerzes. *Med. Wschr.* (Bâle), 25 February 1956, **86**, 8, 201-204.

31. Sontag, L. Determinants of predisposition to psychosomatic dysfunction and disease. Problems of proneness to psychosomatic disorder.

32. ————, and Frank, L. Differences in modifiability of fetal behavior and physiology. *Psychosom. Med.,* **6**, 151, 1954.

33. Stockard, C. *The physical basis of personality.* New York: Norton, 1931.

34. Tupper, C. Conditioning for childbirth. *Am. J. Obs. Gynec.,* 1956, **71**, 733-740.

35. Vermorel, H. *El parto sin dolor.* Buenos Aires: Editorial Cartago, 1957, 181.

36. Yugov, A. *Pavlov, vida y descubrimientos del gran fisiólogo ruso.* Buenos Aires: Editorial Claridad, 1945.

HYPNOSIS IN OBSTETRICS[1]

Santiago Roig García, M.D.[2]

Even though the discovery of antibiotics facilitated the great advancement of modern obstetrics, we continue to confront two problems: pain and anoxia. Anesthetists and obstetricians have been working tirelessly but unsuccessfully in order to find the ideal anesthetic or analgesic for delivery. In all congresses we have agreed that our other problem was to avoid fetal anoxia. The best solution to both problems seems to lie in a resource as old as humanity itself.

In the effort to eliminate pain we have resorted to many types of anesthesia from the Queen's anesthesia to Trilene and the so-called lithic cocktails, without success as far as our main objective is concerned: that is, painless delivery without depression of the vital centers of the fetus and without intra-uterine anoxia. This could not be done because we could not isolate the mother from the fetus, and every drug used for her benefit would depress the child to a greater or lesser degree.

Motherhood, being the most blessed act of nature that it is, should not be accompanied by pain. Thus the means for painless childbirth should have been within man's reach ever since the first woman became a mother, and should be found in nature itself: in the human mind, source of energy and power which, properly guided, can accomplish much. The control of the will, the force of words, the gradual and progressive logical power of suggestion—all can be found in hypnosis.

Considering mothers only as instruments of reproduction, the obstetrician had forgotten that they have souls; that by offering affection and understanding they could feel calmer and more self-confident, elevating the pain threshold and thus making delivery less painful, as Dick-Read has demonstrated. But with the exception of the few followers of Dick-Read and of the Russian reflexologic school — procedures considered by many as too laborious for the urgency of modern life—the tendency of the rest was toward the use of drugs. With the use and abuse of these drugs the results have been deliveries from which the mothers wake up hours later, having completely forgotten, having an amnesia for the birth experience. This not only breaks the maternal-filial relationship — of fundamental importance in the psychic evolution of the child— but it is also detrimental in relation to the organic aspect, as Kroger and Freed have stated: "The data that we now have on fetal anoxia clearly demonstrates that the most important factor in its production is the administration of anesthetic or analgesic drugs to the mother." They ask, "What price for painless delivery?" Regarding the fetal brain, Haldane writes, "Anoxemia not only stops the machine; it destroys it." Slovin says, "As the cerebral tissue of the fetus is not as resistant as that of the adult, the fetus must be provided with sufficient oxygen, thus avoiding irreparable lesions of the nervous system." Fender, Neef, and Binger observed convulsions in octopi whose mothers were deprived of oxygen prior to delivery, and they believe that anoxia of the fetus and the newborn may play an important role in the

---

[1] Presented at the Congress of the Pan-American Medical Association in Mexico City, May 5, 1960. Also being published in Spanish in *La Revista Latino-Americana de Hipnosis Clínica* issued in Argentina by La Sociedad Argentina de Hipnoterapia.

[2] Ave. de la Loma No. 9, Nuevo Vedado F-8018, Havana, Cuba.

etiology of epilepsy. Eastman states: "The struggle against pain during delivery should be reviewed and a new attitude should be adopted, now that it is generally recognized that if sedatives in amnesic doses are administered, more than 50% of the babies suffer from asphyxia at birth." Because of all these considerations, Kroger and DeLee recommend a return to hypnosis to alleviate pain during delivery, since it has been proved to be absolutely innocuous for both mother and child, and that the pain threshold in selected patients can be raised by hypnosis. Quoting DeLee: "Based on more than sufficient experience, I can affirm that the block of the thinking that causes pain is feasible in the majority of the cases." This same author, with Greenhill, says, "It is lamentable to see colleagues scorn such an effective and completely inoffensive method." Finally, Kroger and Freed state: "We believe that hypnosis has many of the properties that an ideal anesthetic should have"; moreover, "It does not alter the normal mechanism of delivery." The psychoanalgesic methods in delivery are so important and beneficial that His Holiness Pope Pius XII intervened wisely and emphatically in the matter, pointing out the theological aspects and authorizing their use in a message directed to the International Assembly of Gynecologists and Obstetricians, which met in Rome in January 1956.

Many have attempted to explain the inherent nature of hypnosis, from Mesmer with his "magnetism" and his "fluids" to Lesner through the concept of psychoplasia and Rhodes with his theory of relative psychic exclusion, which so skillfully explains the three possible states of mind: vigil, sleep, and hypnosis; and the anesthetic action of hypnosis, according to the American theologian Glasner, seems to have been alluded to in the Talmud by the word "tardemah" referring to the state of Adam when Eve was created. This word has been translated as "deep sleep, lethargy, insensibility," and, finally, as "trance-like sleep" in Jastrow's dictionary.

This recourse had been used by Esdaile in India in more than 200 important operations, and as "somnambulistic dream" in some labors and deliveries in the middle of the nineteenth century when anesthesia was rare. Today, one hundred years later, when anesthesia is so popular, hypnosis is seldom used. The rebirth of hypnosis in our times shows that Janet, the great French psychologist, was right. He first oposed and then defended it, writing in his memorable work on relaxation: "If my work should not be completed now, it will be later on, when the tide of fashion brings back hypnosis, and this will happen as surely as the tastes of our grandmothers will return."

Time has proved him right, and the reintegration of hypnosis has been solid and definite. After being accepted as an absolutely scientific therapeutic procedure by the American Medical Association and the British Medical Association, it received its final endorsement in this great Congress, where all the nations of the Americas and all branches of medicine are represented. Among these, for the first time, is this section on Clinical Hypnosis, with which a new chapter in its history is begun.

The hypnotic trance, described by Kogerer as "a normal phenomenon, an incomplete sleep during which one dreams and knows it, remaining in communication with the environment," today is not interpreted either as a state of sleep or as a state of complete unconsciousness: electrocardiograms by Wible and Jenness, electroencephalograms by Loomis, Harvey, and Hobart similar to those of Barker and Burgwin, the electrogalvanic reactions described by Georgi, the studies on arte-

rial tension made by Dorcus, the reports on the cerebral circulation by Nygard, and the measuring of the patellar reflexes by Bass have all proved that the hypnotic state resembles a state of vigil, or wakefulness, and is different from physiological sleep.

The hypnoreflexogenous method,[3] based on the conditioning of reflexes under hypnosis, is at the present, in our judgment, the best procedure for labor and delivery without pain or fear. Even in cases which we have not been able to prepare previously by this method, we find hypnosis the most valuable and inoffensive recourse to relieve the pain of delivery. We say relieve, because even though we get analgesia frequently, or even complete anesthesia, we cannot invariably reach such planes in daily practice. We can achieve, in practical reality, a superficial state of hypnosis which will make effective the administration of very minute doses of the usual drugs. Thus we can manage the delivery without pain, without the depression of the vital centers of the fetus, and with abundant oxygenation, preserving the fetus from noxious repercussions.

We not only use hypnosis daily in private practice, conditioning the patients by the hypnoreflexogenous method throughout pregnancy, but also, as already stated, for the delivery of patients not previously prepared. This we can do, thanks to the valuable and enthusiastic co-operation of our colleagues, Drs. Anibal Dalmau and Armando Alvarez Nodarse. It is necessary in these cases to have someone who can alternate with us in hypnosis during a delivery or cesarean section. There is no better pre-anesthetic than hypnosis, because the misnamed hypnotic trance acts as a sedative to our patients, erases all fear of the operating room, avoids the psychic trauma that the operation may cause, and through post-hypnotic suggestion permits a better post-operative evolution.

In more than one case we have used hypnotic suggestion for the sedation of the premature contractions of an irritable uterus, to activate contractions during delivery, and to obtain better active co-operation from the patients during the period of expulsion.

Moreover, hypnosis is invaluable during pregnancy to alleviate various symptoms of the first trimester, especially hyperemesis. Hypnotic suggestion acts as a sedative on the frequently altered nervous system, and in nearly every case controls this stubborn and troublesome condition.

All our patients have been favorable subjects, due to the mutual affection and esteem which exist between patients and doctors, and these have been deciding factors in the success we have enjoyed. In all our cases we employ as deep hypnosis as possible, suggesting painless contractions, during which we administer oxygen directly and, sometimes, by means of a V-tube, minimal doses of Trilene when necessary. The use of this drug in such minimal doses has no analgesic action at all when the patient is in a state of vigil. We have not tried complicated techniques of hallucinations or amnesia, because we feel that the mother should remember her delivery and that, since it is painless, it is a pleasant memory and one of satisfaction and pride which links her more closely to her baby. Together with the analgesia we obtain by blocking painful impulses (through cortical inhibition, according to Velvovski and by "synaptic ablation," similar to spinal anesthesia in the medulla, according to Kroger and Freed, following Eysenck), we consider it important to have complete muscular relaxation which will greatly facilitate the dilatation of the cervical os. We exclude the relaxa-

[3] See "The Hypnoreflexogenous Method: a New Procedure in Obstetrical Psychoanalgesia," presented by this author at this Congress and published in this number of this JOURNAL.

tion of the uterine musculature, suggesting that it must continue to contract rhythmically and with increasing force. We also suggest a complete relaxation of the nervous system, we try to eliminate emotional tension, to erase fear, worry, anxiety; in short, we make our patients feel completely at peace. Here we describe the method in general terms; each case is handled according to the individual needs of the patient.

There is another observation which we consider of prime interest and which could be of even more importance than our previous ones. The babies delivered under hypnosis are quiet and have an unusual nervous equilibrium. Mothers report that their newborns do not have restless nights. If we can gather sufficient data to prove this, there is no doubt that we are on the way to one of the greatest achievements. We do not pretend that hypnosis can protect them from unfavorable influences. But these babies enjoy the best maternal-filial relations because they are the products of deliveries which are pleasant memories for the mothers — of fundamental importance for the future evolution of the psyche. If they, with the passage of time in a favorable environment, continue to show a better emotional equilibrium, there will be no doubt that we obstetricians have done our part toward the betterment of the human race. With this we may achieve for our sons happier lives, free from so many conflicts brought on by those who were yesterday excited and irritable babies and who today are maladjusted men. We hope to be able to prove this, and that by obtaining healthier minds we can also achieve a better understanding among men and avoid much pain and grief from which the world suffers today.

Here we offer a summary of the clinical histories of some cases that demonstrate different aspects of the benefits derived from hypnosis in our specialty.

Case 1

H.C. 211: We had assisted her in two previous deliveries by the regular method. Labor was induced on April 25, 1958, some days after we were sure labor should have begun. At 10:40 a. m., with a mature cervix, we separated the membranes and carefully administered Pitocin by perfusion. After the uterine contractions became regular, we put her into a deep hypnotic trance with extraordinary muscular relaxation. Normal delivery occurred at 4:30 p. m. No analgesic was used, and no drug other than that used for induction. During labor she co-operated in the two digital examinations that we made, got on the stretcher and from the stretcher to the delivery table by herself, and co-operated actively during the expulsive period, absolutely without pain and without any drugs. An interesting point is that, although she was completely calm during labor, she suffered an acute nervous crisis at the moment of delivery. Dr. J. Washington, pediatrician on the case, who had followed its evolution with great interest, will remember that at that dramatic moment we thought we had failed. Later the patient explained that she had had no pain, but that the crisis had been due to the fact that she had the idea she was going to die during this delivery, and for this reason she had screamed with fright at the last moment.

Case 2

H.C. 226: A primapara, being assisted by a midwife, who called us at 1 p. m. because the patient had been suffering acutely since 6 a. m. and had completely lost emotional control. We found her extremely excited. A cephalic presentation was noted in second plane, right dorsal, with 6 cm. of resistant dilatation. The contractions were intense and of alarming frequency, so we injected intramuscularly 0.10 gm. of Papaverine with .025 gm. of Chlorpromazine. Immediately we put the patient into a deep hypnotic trance. The nurse was surprised at the sudden change in the patient, who was delivered quietly at 4:30 p. m. We believe that our success in this case was due to the fact that the patient, desperate for help, found refuge in hypnosis as a solution to her problem. We all know how difficult it usually is to hypnotize a subject under such conditions.

CASE 3

H.C. 257: Patient was 38 years old. This was her first pregnancy carried to term after six miscarriages in nine years. Her labor began on November 15, 1958. After 4 cm. of dilatation, on doing an amniotomy we found meconial fluid, but the fetal heart tones were good. Considering the obstetrical history, we ordinarly would have performed a cesarian section, but in this case we anticipated a short labor; also we had been able to put the patient under deep hypnosis, eliminating the necessity for the use of any depressor drug and providing the opportunity for constant oxygenation. We then decided to let labor continue under strict supervision, and delivered her vaginally an hour later. At the moment of delivery we gave her a minimal dose of Trilene, which with the amount of oxygen she was getting, could not have had any analgesic effect in her state of vigil.

CASE 4

H.C. 267: The patient came to us because she wanted to be delivered by hypnosis. Due to her enthusiasm for this new procedure, she was also attending an institution in the city where patients are prepared by psychoprophylactic method, associated with hypnosis. We did not know about this; however, although she was under hypnosis, we noticed from the beginning that as the contractions became stronger this patient not only felt pain but also paid no attention to suggestion. She became more and more excited; we injected Meperidine and Chlorpromazine and even resorted to pure Trilene — the valve was wide open. The cortical irritation was such that the patient was frankly demented, breaking loose from restraints, screaming wildly, and requiring several persons to hold her on the table. The position, posterior occipital, meant that spontaneous delivery would be impossible. We could not apply forceps with the patient in this condition. This was one of the most anxious moments of our career. Suddenly, the patient shouted to us to pass a hand over the pubis. Doctor Dalmau did so, and all the excitation and pain disappeared immediately. Our patient became passive, and continuing the suprapubic massage, we applied forceps and delivered her. Afterwards we understood what had happened: In the treatment she had been getting secretly, she had been so conditioned under hypnosis to that reflex-pattern that she could not conceive of delivering without the suprapubic massage, nor could she accept any other suggestion.

CASE 5

H.C. 287: A gravida I, she presented a vulvovaginal narrowing and an intense vaginismus. Near term we found examination impossible, because the patient at the mere touch of the finger unconsciously drew back and closed her legs. Even after labor began, we had the same difficulty, and it was impossible to examine her. Under deep hypnosis, we were able not only to examine her, but also to deliver her.

CASE 6

H.C. 345: After three years of sterility, the patient began a premature labor (7 months pregnant). Two hundred mg. of Progesteron, an enema of laudanum, 4 ampules of Releasin, 6 of Papaverine, 2 of Chloropromazine, and 3 of Avacan were administered without stopping contractions. We were able to control the contractions under deep hypnosis, but they returned as soon as the patient awoke, posthypnotic suggestions being of no avail. At delivery we found the cause: a small placenta, more than 50% atrophied. It is difficult to believe that this pregnancy could have reached even 7 months or that the fetus could have maintained such good condition with such a small amount of villous chorion.

CASE 7

H.C. 390: During three previous pregnancies the patient had vomited up to the time of delivery, and this had greatly affected her general condition. At the beginning of this pregnancy she was admitted, and the condition improved under the usual treatment, only to get worse again rapidly. For this reason we added hypnosis to her treatment, without definite success. We abandoned gentle suggestion and used techniques of imposition, which we do not advocate or usually employ. The patient had no more vomiting, although some days later she developed a facial paralysis. She was seen by Dr. Virgilio Beato Núñez. The facial paralysis disappeared rapidly under hypnotic treatment, as there was no anatomic substratum. However, we understood that her emotional conflicts must be treated, so Dr. Carlos Rodríguez Collumbie was called in. With his co-operation the patient was enabled to make her adjustment and to continue her pregnancy normally without any more vomiting. She was prepared by the hypnoreflexogenous method and delivered normally and without pain. No medication other than oxygen was administered during labor and delivery.

Case 8

H.C. 437: Without any previous preparation, this patient was hypnotized as a pre-anesthetic for a cesarean section. Without help, she moved herself onto the stretcher and from it to the operating table. She cooperated perfectly for the administration of spinal anesthesia which was painless. We brought her out of the trance at the moment the baby was extracted, so that she could see it, and she stated that she thought she was in her room and had no idea that anything had occurred. The rest of the operation was performed without vomiting, the patient talking animatedly with us, as she had not had any other sedative. Her post-operative period was normal and painless, due to post-hypnotic suggestion. Six hours after the operation she walked and ate normally, and was discharged on the third day.

Conclusions

1. Hypnosis is beneficial in numerous aspects of obstetrics.

2. We can treat nervous hyperexcitability, vomiting, and other disturbing symptoms of the first trimester, symptoms which often have detrimental effects on the general condition of our patients.

3. Hypnosis is the ideal pre-anesthetic for cesarean sections. It not only produces sedation but also eliminates fear of surgery and subsequent psychic trauma. These effects cannot be accomplished by other means without harm to the fetus. Furthermore, post-hypnotic suggestion influences the post-operative period.

4. With deep hypnosis, we can not only influence uterine dynamics, but also obtain complete analgesia and anesthesia without the use of drugs.

5. In daily practice, it is not always possible to put the patient into a deep trance. In these cases light hypnosis potentializes minute doses of analgesic drugs.

6. Analgesia and anesthesia produced by hypnosis are easily controlled and can be suppressed at any moment. Drugs once administered cannot be withdrawn.

7. Under hypnotic analgesia and anesthesia there is no excitation or delirium. There is no harm for either mother or child.

8. There is no tension or fear in our patients. Complete muscular relaxation facilitates dilatation of the cervix and a more rapid delivery. Thus mothers gain confidence for future pregnancies.

9. Some cesarean sections may be avoided, because intrauterine fetal anoxia is prevented by simple oxygenation and the fact that no drugs are used.

10. For the same reasons, processes of oxidation and metabolic changes in the uterine musculature are facilitated, improving its function. The patient co-operates actively at the moment of expulsion, eliminating the necessity for forceps, which would have to be used if the patient were anesthetized or unco-operative.

11. Mothers have greater resistance to sepsis and obstetrical shock, since hypnosis raises resistance to fatigue and muscular exertion. They are not depressed by any drug and they have received plenty of oxygen. They are not tired after delivery, they can move about, take nourishment, and enjoy their babies. They feel closer to their babies because of the pleasurable memory of delivery.

12. The baby, without drugs and with plenty of oxygen, has, through the mother-child relationship, an ideal basis for his future psychic development.

13. The babies benefit greatly from this procedure. They have emotional equilibrium, which we feel is of transcendental importance in lives which are just beginning.

14. Hypnosis permits us to erase, modify, or fix new conditioned reflexes, which are the basis of our hypnoreflexogenous method.

15. Although we do not pretend that hypnosis is a panacea, since it does not solve abnormalities in delivery, we feel that its re-incorporation is, without doubt, the most valuable contribution made to obstetrics in many years.

SUMMARY

In this work, a brief exposition of the present concept of hypnosis and its historical development is offered, and the grave risks of deep or prolonged drug anesthesia during labor and delivery are outlined. We have demonstrated that by hypnosis a delivery that is painless for the mother and harmless for the fetus can be managed. Other aspects of obstetrics benefited by hypnosis are explained, including a resumé of illustrative cases. Among the results obtained, the pleasing emotional relaxation found in the babies delivered under hypnosis is pointed out. In conclusion, we outline the present status of hypnosis in modern obstetrics.

REFERENCES

1. Barker, W., and Burgwin, S. Brain wave patterns during hypnosis, hypnotic sleep and normal sleep. *Arch. Neurol. Psychiat.*, 1949, **62**, 412-420.
2. Bass, M. Difference of the hypnotic trance from normal sleep. *J. exp. Psychol.*, 1931, **14**, 382-399.
3. Chertok, L. Los métodos psicosomáticos del parto sin dolor: historia, teoría y práctica. Madrid: Editorial Científico-Médica, 1958.
4. De Lee, J., and Greenhill, J. Editors' comments on the article "Pain relief in labor" by R. M. Grier. *Yb. Obstet. Gynec.*, 1938, 142-143.
5. ————. Editors' comments on the article "Pain Relief in Labor" by J. Sturrock. *Yb. Obstet. Gynec.*, 1939, 164.
6. Dick-Read, G. *Parto sin dolor.* Buenos Aires: Editorial Central, 1956.
7. Dorcus, R. Effect of suggestion and tobacco on pulse rate and blood pressure. *J. exp. Psychol.*, 1925, **8**, 297-309.
8. Eastman, N. Apnea neonatorum. *Amer. J. Obstet. Gynec.*, 1940, **40**, 647-651.
9. Eysenck, H. Suggestibility and hypnosis. An experimental analysis. *Proc. roy. Soc. Med.*, 1943, **36**, 349-354.
10. Fender, F., Neff, W., and Binger, G. Convulsions produced by fetal anoxia: experimental study. *Anesthesiology*, 1946, **7**, 1013.
11. Georgi, F., and Beitrage, Z. Kenntnis des psychogalvanischen Phänomens. *Arch. Psychiat. Nervenkr.*, 1921, **62**, 571-597.
12. Glasner, S. A note on allusions to hypnosis in the Bible and Talmud. *J. clin. exp. Hypnosis*, 1955, **3**, 34-39.
13. Haldane, J. Quoted by DeLee in *Yb. Obstet. Gynec.*, 1940, 165.
14. Janet, P. *La médecine psychologique.* Paris: Flammarion, 1923. P. 228.
15. Kogerer, H. Die posthypnotische Geburtsanalgesie. *Klin. Wschr.*, 1922, No. 23, 513-517; No. 24, 538-540; No. 25, 558-561.
16. Kroger, W., and DeLee, S. The use of the hypnoidal state as an amnestic, analgesic, and anesthetic agent in obstetrics. *Am. J. Obstet. Gynec.*, 1943, **46**, 655-661.
17. ————, and Freed, S. *Ginecología psicosomática con inclusión de algunos temas de obstetricia.* Barcelona: Salvat Editores, 1955.
18. Lerner, M. Enfoque actualizado de los conceptos de sugestión e hipnosis. *Acta Neuropsiquiat. Arg.*, 1958, **4**, 2.
19. Loomis, A., Harvey, E., and Hobart, G. Brain potentials during hypnosis. *Science*, 1936, **83**, 239-241.
20. Nygard, J. Cerebral circulation prevailing during sleep and hypnosis. *Psychol. Bull.*, 1937, **34**, 727.

21. Pius XII. L'accouchement sans douleur. (Discours prononcé par Pie XII devant L'Assemblée internationale de Gynec. et d'Obstét. à Rome.) *L'Osservatore Romano*, Jan. 1956, 9-10.
22. Rhodes, R. *Hipnosis: teoría, práctica, y aplicación.* México: Impresiones modernas, 1958.
23. Roig García, S. Método hipnorreflexógeno, nuevo procedimiento profiláctico de psicoanalgesia obstétrica. La Habana: VI Congreso de Obstetras y Ginecológos Cubanos, 1959.
24. Slovin, I. Fetal blackout *Del. State Med. J.*, 1946, **18**, 183-186.
25. Velvovski, I., Platonov, K., Plotitcher, V., and Chougom, E. *Analgésie obstétricale psychoprophylactique.* Leningrad: Medgiz, 1954, 290 p. (Russian.)
26. Wible, C., and Jenness, A. Electrocardiograms during sleep and hypnosis. *J. Psychol.*, 1936, **1**, 235-245.

HYPNOSIS APPLIED TO BOWEL AND BLADDER CONTROL IN MULTIPLE SCLEROSIS, SYRINGOMYELIA, AND TRAUMATIC TRANSVERSE MYELITIS

Richard F. Baer, M.D.[1]

Patients with traumatic paraplegia, and frequently those with multiple sclerosis or syringomyelia, constitute serious problems in physical medicine and rehabilitation because of the attendant distressing bladder and bowel difficulties. Their incontinence is a severe vocational, social, and psychological handicap in addition to being a constant threat to physical health. In certain selected patients of this type, hypnosis can be used effectively to minimize and sometimes to alleviate completely these particular symptoms as well as the difficult problem of muscle spasticity so often encountered in these patients.

Most patients with far advanced cases of multiple sclerosis, syringomyelia, and complete high transverse myelitis cannot be helped materially, but the patient with incomplete myelitis and the still ambulatory patient with either of the other two diseases can benefit considerably. For example, the author's secretary, a paraplegic from a severe cord contusion in the lumbar area, has been able, ten years after trauma, to learn complete bowel, bladder, and spasticity control.

Several approaches have been developed for the utilization of hypnosis in meeting the varying needs of patients. A method effective for one patient may prove ineffective on another, even similar patient. There is a need to explore the possibilities of meeting individual needs and understandings. For the most part a medium trance suffices.

In a case of multiple sclerosis or syringomyelia, a most effective and long-lasting measure is having the patient relive hypnotically the experience of voiding or defecating at some past time prior to the onset of his bladder or bowel symptoms. This revivification of past memories and body learnings enables the effective suggestion of a continuance of such past responses and control, and for the majority of such patients this reorganization of responses will last from two weeks to three months before further hypnotic reinforcement is needed.

Another approach to this problem is to teach the patient in the trance state a cue by which he initiates the appropriate bowel or bladder response to an inopportune excretory urge. The multiple sclerosis patient in particular must learn to postpone urination and defecation, something he is normally unable to do. This is done by having the patient in the trance state experience an intense desire to void or defecate but not to act upon this urge, merely to sense it thoroughly. Then the patient is given suggestions to intensify the sensations greatly. When both the patient and the operator are satisfied that this has been done adequately, the patient is instructed to place his thumb and index finger in opposition and to squeeze them together and that the harder he does this the more adequately and appropriately the pertinent viscus will respond. Once this learning of the appropriate control of the bladder and bowel sphincters has been achieved, suggestions are given that this learning will extend into the waking state and that by means of the learned appropriate sphincter response, there can be a postponement of elimination until a

[1] Chairman, Departments of Physical Medicine and Rehabilitation, Children's Hospital and St. Vincent's Hospital, Toledo, Ohio.

more convenient time. This approach may be used singly or in conjunction with the first method described, since some patients need a combined procedure to meet their needs.

The problem of sphincter control is somewhat different in the patient with traumatic paraplegia, and there is a sex difference in regard to the urinary sphincter. The male patient cannot achieve control in complete cord transection, whereas the female can because of the anatomical difference in the voluntary external sphincter.

Paraplegic patients can be taught bowel control in the following fashion. In the trance state they are given an understanding and appreciation of the physiology of the duodenocolic reflex. This reflex causes an emptying of the colon and is most active in the morning and in younger people. In hypnosis the patient is regressed to an earlier age level and is asked to experience a revivification of defecatory sensations. This accomplished, he is given post-hypnotic suggestions that daily upon awakening he will arise, sit on the toilet, imbibe a cup of coffee or milk and experience a spontaneous bowel movement. If the patient is earnest and conscientious in his efforts, success almost always results. If the patient is an unusually good subject, he is instructed to develop a trance state upon sitting on the toilet and to re-experience a previous defecation and to act upon this. Soon these subjects become so fully conditioned to the act of sitting on the toilet that results occur automatically.

As in all other utilization of hypnosis, the results vary from patient to patient. Not all respond, but a sufficiently large proportion does to justify routine investigation. For example, of the author's current series of five traumatic paraplegics, three have definitely benefited. In multiple sclerosis and syringomyelia the proportion benefiting is much higher, reaching, in the author's experience, 80 per cent.

All patients making a good response were well motivated and still ambulatory or in wheel chairs; nevertheless, all having this general type of physical disability should be given the opportunity of attempting to better their condition through the utilization of hypnosis.

EXPLAINING THE DURABILITY OF "CONTROL OF FEAR"

Joseph Wolpe, M.D.[1]

In a recent paper, on the basis of a consideration of various methods of treating phobias by the use of hypnosis, Haley (1) claims to find "a similar pattern at the most general level" in all methods of psychotherapy. He states that the essential process requires: (a) the patient must be persuaded that a change is possible; (b) the patient must participate in bringing the change about so that he has some investment in having it happen; and (c) the patient must begin to look for and notice the changes that do occur. The crux of this process, according to Haley, is that "the patient must notice that he has been influenced by the therapist, and the patient's behavior is changed because it has been 'taken over' by the therapist."

In the course of his discussion, Haley makes reference to systematic desensitization, which is one of the methods of therapy described by the present writer in *Psychotherapy by Reciprocal Inhibition* (3) and to the theory presented to explain how change in behavior occurs. This therapeutic method is based on earlier studies (2, 3) on the induction and elimination of experimental neuroses which showed these conditions to be persistent habits of unadaptive behavior acquired by learning (conditioning) and characterized by anxiety. Unlearning was procured by feeding each animal a number of times while it was responding with mild anxiety to a stimulus slightly resembling some aspect of the conditioning situation. The strength of the anxiety response to the particular stimulus progressively declined eventually to zero. Increasingly "strong" anxiety-evoking stimuli were successively dealt with in this way, and eventually the conditioned anxiety responses were eliminated in respect to all stimuli.

These experimental findings led to the formulation of the general proposition that if a response that is physiologically antagonistic to anxiety can be made to occur in the presence of a stimulus previously conditioned to anxiety, the anxiety will be inhibited and the *habit* of responding with anxiety to that stimulus will in consequence be to some extent weakened. This principle has been successfully applied to human neuroses in a number of different ways (3). Human neuroses consist largely of persistent habits of responding with anxiety to stimulus situations that are objectively harmless, and these habits can be broken down through inhibiting anxiety by other responses. In the desensitization technique to which Haley alludes, the emotional effects of deep muscle relaxation are used to counteract the anxiety-evoking effects of progressively more disturbing situations presented to the imagination of the hypnotized patient.

Haley disputes that the changes in behavior thus procured can be attributed to "internal processes," i.e., that they are based on changes within the individual that are brought about by the learning process. He contends that if deconditioning methods are examined from an interpersonal point of view they appear similar to other examples he describes of "relief of fear by taking control of a patient's behavior in the fearful situation."

Haley and I evidently agree insofar as we both believe that an undesirable

[1] Research Professor of Psychiatry, Department of Neurology and Psychiatry, University of Virginia School of Medicine, Charlottesville.

habit of reaction may be overcome through eliciting in the patient new behavior in the presence of the stimuli that ordinarily instigate the undesirable behavior. Within the framework of a therapeutic situation, there are many ways of inducing behavior which may inhibit a patient's anxiety. To cause the patient to be deeply relaxed and then present him with stimuli that are usually mildly disturbing —as in the desensitization technique— is one way to do it. To elicit behavior in contrast to the patient's usual patterns through direct hypnotic suggestion of different kinds is another way. The same result is produced by different means, and the theorist needs to explain how it comes about that the evocation of an uncustomary response *on a given occasion* leads to a lasting change in the patient's way of responding to the relevant stimulus situation. I explain this as a phenomenon of learning. Haley leaves it unexplained. The question that must be put to Haley is: If it is not learning that accounts for the fact that changing behavior at a particular time may lead to a lasting habit of changed behavior, what is it? If it is learning, surely it must be based upon changes *within* the individual.

REFERENCES

1. Haley, Jay. The control of fear with hypnosis. This JOURNAL, 1960, **2**, 109-115.
2. Wolpe, Joseph. Experimental neuroses as learned behavior. *Brit. J. Psychol.*, 1952, **43**, 243-268.
3. ————————. *Psychotherapy by Reciprocal Inhibition.* Stanford: Stanford University Press, 1958.

THE VALUE OF SUGGESTION GIVEN UNDER ANESTHESIA: A REPORT AND EVALUATION OF 200 CONSECUTIVE CASES

Donald D. Hutchings, M.D.[1]

The use of posthypnotic suggestion is basic to much hypnotic work and receives much mention in the literature. Alterations of ideas, attitudes, performances and even personalities have been credited to posthypnotic suggestion. By posthypnotic suggestion is meant the administration of suggestions in a trance-induced state of psychological awareness differing from the usual state of conscious awareness.

Even as hypnosis alters the psychological state, so does anesthesia bring about very marked changes in psychological awareness as well as changes in the physiological state. There are many references in textbooks and in studies of anesthesia regarding these psychological changes as a patient enters what is called a state of general anesthesia. Particular mention is made of the order in which the cardinal senses seem to disappear. General agreement has it that the sense of hearing is the last to be lost by the patient as the physiological state of general anesthesia develops. But this does not mean that a physiological state of general anesthesia necessarily constitutes an absolute psychological state of general anesthesia. For some time now investigators working with hypnotic patients have felt that the sense of hearing may never leave the patient, even under general anesthesia.

In October 1958 at the First Annual Meeting of the American Society of Clinical Hypnosis David Cheek, M.D., reported his experiences with patients and physicians who had acted as volunteers at hypnotic training sessions (1). He found that persons who had received general anesthetics for surgery could recall information regarding statements made during their surgical experiences, that these statements were recoverable using hypnotic techniques, and that these statements seemed to be unavailable to the patient's conscious mind until hypnotic techniques were used. He found, further, that these statements frequently had a bearing upon the patient's attitude regarding the surgery itself and its success, as well as upon the patient's feelings and attitudes regarding the surgeon and his assistants. His paper clearly set forth data regarding the ability of anesthetized patients to hear and retain, unconsciously, statements, even casual comments, made during the course of a general anesthesia.

Following the presentation of this paper, L. S. Wolfe, M.D., considered the possibility of utilizing this unexplored field of awareness for the patient's betterment. In October 1959 at the Second Annual Meeting of the American Society of Clinical Hypnosis, Dr. Wolfe presented a paper reporting the use of hypnotic suggestions given to approximately 1500 patients during the period of surgery and general anesthesia (2). This was done without any prearrangement of any sort with regard to any of the patients. The suggestions were worded to relate to the postoperative period of recovery and to the matter of general comfort and healing. His findings were of a rather interesting nature regarding the decrease in postoperative use of narcotics, especially with children, and the lessening of pain and the diminution of use of narcotics with adults. His report was that none of the children needed narcotics, and that 70 per cent of adults were without postoperative needs for

[1] 121 E. Steuben St., Bath, N. Y.

drugs. His report showed further that patients readily denied the presence of pain after surgery even when asked postoperatively. These findings were received with marked interest, and the conclusion was generally and individually reached that patients could be benefited significantly by offering suggestions to them while in the anesthetic state concerning the course and nature of their postoperative convalescence.

In December 1959, with knowledge of the entire medical staff of my small hospital consisting of 75 beds, it was decided to institute suggestive therapy while patients were under anesthesia. All patients coming to surgery were used in this series, without regard to type of surgery, i.e. major or minor. All other aspects of the care of these patients were kept constant. Premedication was used as usual and postoperative orders were written as before by each of the attending surgeons, each following the routines they considered necessary for the patients' welfare.

Two sets of suggestions were written on cards; one for children, since the greater part of their surgery would be tonsillectomies, adenoidectomies, and herniorrhaphies, and a second card for the adults. The appropriate suggestions were read to each patient after the major portion of the surgery was completed and when the surgeon was closing the wound or completing the surgical procedure. The nursing personnel of the hospital was utilized in the investigation; they made notes, which were examined for further information. There was also the careful and independent evaluation of the patients by both the surgeon and the anesthetist.

The cards read to the patients bore the following suggestions:

(1) Mr. X., your operation has been completed. There was no serious disease found.

(2) You will heal promptly and well.

(3) You will awaken from the anesthetic as if you had been asleep at night, feeling rested and refreshed.

(4) You will have no pain at the place that was operated.

(5) You will eat well and sleep well, enjoying your hospital stay.

(6) You will urinate easily and move your bowels regularly.

These suggestions were modified for the pediatric patients regarding their comfort after throat surgery. The 200 cases that are reported in this study are unselected and consecutive surgical patients, regardless of age, sex, or kind of surgery. Their age distribution is as follows:

0-12 years	22
12-20 years	27
20-40 years	64
40-60 years	57
60-80 years	23
80 years and over	7
	200

The type of surgery may be placed in the two following categories:

Entered abdominal cavity	88
All others	112
	200

The distribution of narcotic administration is as follows:

Patients receiving no narcotics	140
Patients receiving less than 50 mg. Demerol	31
Patients receiving 50-100 mg. Demerol	21
Patients receiving over 100 mg. Demerol	8
	200

These eight cases received over 100 mg. Demerol for the following indications:

(1) Received for a concomitant bursitis not related to surgery.

(2) Pelvic lap—received 5 doses in 24 hours, none thereafter.

(3) Hysterectomy—received 5 doses at regular intervals regardless of complaints. This was so ordered by her physician.

(4) Cholecystectomy — negativistic patient who did not want surgery done—7 doses.

(5) Cholecystectomy with bursitis, which increased the need for narcotics.

(6) Hysterectomy with continued vomiting despite 7 doses of Demerol averaging 100 mg.

(7) Nephrectomy — patient received 15 doses of Demerol, but the final result was a total failure.

(8) Abdominal-perineal for cancer — received Demerol over the first 72 hours.

The types of surgical procedure were as follows:

Inguinal hernia	Nephrectomy
Varicose veins with stripping	Oophorectomy
Thyroidectomy	Dilation and curettage
Hysterectomy	Fractures
Mastectomy	Tendonotomy
Orchidectomy	Perineal repairs anterior and posterior
Amputation	
Patellectomy	
Cholecystectomy	Ventral herniorrhaphy
Appendectomy	
Tonsillectomy and adenoidectomy	Prostatectomy
	Colonic carcinoma (abdominal and perineal surgery)
Hemorrhoidectomy	
Colonic section	
Bladder calculi	

Of the total number of patients, 70 per cent received no narcotics postoperatively. Only 4 per cent of the total cases received over 100 mg. of Demerol. By these standards there was a definite decrease in the need for postoperative narcotics.

Evaluating the success by considering only major cases where extensive surgery was done and the abdominal cavity was entered, the success was not quite as marked. Of the major cases, 15 per cent received no medication, and an additional 21 per cent received less than 50 mg. of Demerol, that is, a total of 36 per cent received very little postoperative narcotics.

Of the minor cases, 84 per cent received no narcotics, and 99 per cent of all minor cases received no more than 50 mg. of Demerol or its equivalent.

Postoperative nausea and vomiting were minimal except in a few striking cases which were, unfortunately, failures.

Many of the nurses' notes contained this simple informative statement: "Demerol 50 mg. Patient restless. No pain."

I believe that patients can hear while under general anesthesia, that they do hear and understand suggestions given while they are under anesthesia, and that this method of suggestion during general anesthesia has a useful application to the field of surgery. I am unable to reach as favorable a proportion of results as did Dr. Wolfe, but my series is a small one. I believe the major area of favorable results is in those cases where the abdominal cavity is not entered.

Postoperative care is made easier by suggestions given during the anesthetic state in that the patients are more comfortable and more cooperative. Nausea and vomiting are decreased. Wound healing is apparently hastened, possibly because of an earlier meeting of the patients' nutritional needs. Of particular note in this series was that there were no recorded instances of a need for postoperative catheterization.

As Dr. Wolfe commented at the close of his paper, I too feel that these

findings can be bettered with more adequate understanding of the methods of presentation of suggestions to the patients, and that perhaps the standardizing of such suggestions leaves a great deal to be desired.

It is my earnest desire to improve the patients' entire hospital stay, including the postoperative period. I hope that other anesthetists will follow this work with investigations of their own and report their findings.

REFERENCES

1. Cheek, D. B. Unconscious perception of meaningful sounds during surgical anesthesia as revealed under hypnosis. This JOURNAL, 1959, 1, 101-113.
2. Wolfe, L. S., and Millet, J. B. Control of post-operative pain by suggestion under general anesthesia. This JOURNAL, 1960, 3, 109-112.

RELATIONSHIPS BETWEEN ANXIETY AND HYPNOTIZABILITY

Fred Heilizer, Ph.D.[1]

The purpose of this paper is to summarize the literature bearing upon relationships between anxiety and hypnosis. As an integral part of the summary, we shall apply the following operational distinction to both the anxiety and the hypnosis concepts: we shall distinguish between the phenomenon and factors which influence it, on the one hand, and the differential characteristics of people who exhibit the phenomenon in varying degrees, on the other hand. A concept defined by the first approach will be called "situational" (thus, "situational anxiety" and "situational hypnosis"), since it is defined in terms of experimental manipulations or situations. A concept defined by the second approach will be called "personal" (thus, "personal anxiety" and "personal hypnosis"), since it is defined in terms of personal characteristics. The following sections on the anxiety concept and the hypnosis concept will illustrate this definition.

THE ANXIETY CONCEPT

Historically, there have been two approaches to the definition of the anxiety concept. The first approach involves the use of stressful or anxiety-producing situations. The stressor results in behavioral changes which are accepted as either measures of anxiety or effects of anxiety. The behavior elicited by the stressor is relatively temporary, since it is intended for use only during the course of the experiment. Thus, what we call situational anxiety utilizes a stressful situation as an independent variable in order to produce temporary behavioral changes which serve as the dependent variable. The second approach involves the use of testing procedures. It is assumed that the test behaviors are relatively constant for a relatively long period of time. Selection of subjects on the basis of a test score allows the experimenter to observe relationships between the test measure of anxiety and other variables. Thus, what we call personal anxiety utilizes a relatively permanent response as an independent variable as a procedure for the selection of subjects in order to evaluate relationships with other dependent variables.

Measures of situational anxiety as well as measures of personal anxiety can be correlated with other variables. For example, the investigator can determine, through the use of an anxiety scale and a test for hypnosis, the relationship between personal anxiety and hypnotizability. Similarly the investigator can determine, through the use of a stressful situation and a test for hypnosis, the relationship between situational anxiety and hypnotizability. In the latter instance the stressful situation presumably has no effect upon the test for hypnosis, that is, the two variables are sufficiently separated in time to be judged independent. If the stressful situation should immediately precede the hypnosis, or if they should occur concurrently, then we would speak of the effect of the situational anxiety upon hypnotizability. Thus, where the situational anxiety and the hypnosis are independent we would speak of the relationship between the two; where the situational anxiety and the hypnosis are not independent we would speak of the effect of the one upon the other.

THE HYPNOSIS CONCEPT

A similar distinction can be applied to the hypnosis concept. A situational

[1] Psychology Service, Veterans Administration Hospital, Brockton, Massachusetts.

approach would define hypnosis in terms of the manipulations which are used to induce or to vary the phenomena. Thus, hypnosis might be defined in terms of the language used, the appearance of the hypnotist, or the general surroundings. A personal approach would define hypnosis in terms of the characteristics of good subjects as compared to the characteristics of poor subjects. It might be found that good subjects are more deferent than poor subjects, and so hypnosis would be defined in terms of deference. As with the anxiety concept, the extent to which the same concept or explanation is appropriate for the two approaches is an empirical matter; it is not a logical given. We may find that tall people are better hypnotic subjects than short people. It does not necessarily follow that a deeper hypnosis can be achieved by stretching potential subjects. It may be found that a situation of total darkness is optimal for the induction of hypnosis. It again does not necessarily follow that totally blind people are better hypnotic subjects than sighted people.

In applying the distinction between personal definitions and situational definitions to the area under consideration—anxiety and hypnosis — we find that the studies in the literature fall into two categories. In the first category, both anxiety and hypnosis are defined as personal, that is, in terms of relatively permanent characteristics of the subjects. These studies are directed toward the question, "What are the characteristics of hypnotizable subjects as compared to nonhypnotizable subjects?" In the second category, both anxiety and hypnosis are defined situationally, that is, in terms of the manipulations of the experimenter. These studies are directed toward the question, "What are the effects of situational anxiety upon hypnotizability?"

During the remainder of this paper, we shall use the terms "personal anxiety" and "neurosis" interchangeably on the theoretical grounds that the two concepts are closely related and with some empirical support in the form of a correlation of .92 between the Maudsley Medical Questionnaire, a widely used measure of neuroticism, and the Taylor Anxiety Scale (11).

PERSONAL ANXIETY AND HYPNOTIZABILITY

Several studies indicate the existence of a positive correlation between neuroticism and hypnotizability. In the most comprehensive of these studies Eysenck (9) found a perfect positive rank-order correlation between neuroticism and postural sway for groups of neurotics and normals. In the same publication Eysenck, using a paper-and-pencil questionnaire, demonstrated that "suggestible neurotics and nonsuggestible neurotics differ with precisely the same factor [neuroticism] as do neurotics as a whole and normals (p. 272)." In another study Eysenck (8) reports that the neurotics swayed significantly more than the normals, and concludes "that *there is a close relation between primary suggestibility and neurosis* (p. 410)." In a third study Eysenck (7) found that neurotics were most responsive on the postural sway test when they were first admitted to the hospital and that their postural sway scores decreased during a period of four weeks at the hospital. He interprets this finding as supporting his hypothesis that neuroticism and hypnotizability are positively related by assuming that hospitalization resulted in a psychological improvement in the patients. Himmelweit and others (13) found a tetrachoric correlation of .51 between postural sway and diagnosis of neurosis. This correlation actually indicates that neurotic subjects swayed more than normal subjects, since the correlation was based upon a dichotomy between neurotic and normal subjects. Lastly, Ingham (15, 16) reports that neurotics

demonstrate significantly more postural sway and arm-movement suggestibility than do normals.

All of the above studies either used only neurotic subjects or compared neurotics to normals. In a second group of studies comparing neurotics to normals, no relationship was found between neuroticism and hypnotizability. Bartlett (2), using hospitalized neurotics and normals, found no difference between the two groups on the postural sway test. In an early study Eysenck (6), using hospitalized neurotic soldiers, concludes that there is "good agreement with the findings of Bartlett, who found no differences between neurotics and normals in the Body Sway Test (p. 30)." Ingham (15) reports that two of his students found that neurotics and normals did not differ significantly on the postural sway test.

Since the first group of studies is generally superior to the second group in terms of the number of subjects employed and since no differences between neurotics and normals have been reported in the negative direction, we conclude (a) that neurotics are more hypnotizable than normals and (b) that there is a positive correlation between neuroticism and hypnotizability when neurotic subjects are used.

There is, however, no indication of a relationship between neuroticism and hypnotizability when normal subjects are used. Davis and Husband (5), Bartlett (3) and Messer *et al.* (18) report no relationship between neuroticism, as defined by the Thurstone or Bernreuter Personality Schedule, and hypnotizability, as defined by a depth of hypnosis scale or by postural sway. Benton and Bandura (4) report a nonsignificant correlation of .19 between static ataxia (a measure of neuroticism) and postural sway. This is consistent with a rarely quoted correlation, reported by Eysenck (9, p. 277), of .06 between static ataxia and postural sway with normal subjects. A nonsignificant relationship ($r = -.11$) between static ataxia and postural sway was again found by Heilizer (12). Furthermore, using postural sway and heat-illusion definitions of hypnotizability and a variety of measures of personal anxiety, he reports no relationship between personal anxiety and hypnotizability.

Thus, we conclude that there is no evidence of a relationship between neuroticism or personal anxiety, on the one hand, and hypnotizability, on the other hand, when normal subjects are used. The discrepant results of the studies which used neurotic subjects as compared to the studies which used only normal subjects will be further pursued after the presentation of the studies in the next section.

EFFECT OF SITUATIONAL ANXIETY UPON HYPNOTIZABILITY

An illustration of the kind of behavior noted by many investigators may be taken from Kline (19), who writes that with many subjects "the process of hypnosis is one of dealing with stress, anxiety, and the defenses against anxiety (p. 121)" and speculates that "we may think of a continuum of hypnotic response ranging from reaction to resistance and paralleling the amount of anxiety which is stirred up (p. 122)." Similar observations have been made by Sarason and Rosenzweig (19) in a more experimental setting. They administered the hypnosis card of the TAT series to college students after hypnosis had been attempted. They write that "a greater degree of fear or anxiety is found in the stories of the non-hypnotizable than in those of the hypnotizable subjects (p. 157)."

It is probable in Sarason and Rosenzweig's study that the anxiety, or lack of it, expressed in the story is a reflection of the subject's experiences during

the hypnosis. A study reported by White (20) is similar to the above except that the hypnosis card was administered before hypnosis was attempted. No mention was made of hypnosis, although the subjects knew that hypnosis was to be attempted at a later session. White obtained a rank-order correlation of .56 between the success attributed to hypnosis in response to the TAT card and the actual hypnosis rank. This result is consistent with the observations above if we assume that there is a negative relationship between the amount of anxiety elicited by a situation and the success attributed to the hypnosis in a projective situation. More specifically, if we assume that people who fear hypnosis (a) will be more anxious than people who do not fear hypnosis when placed in a situation which is structured in relation to hypnosis and (b) will attempt to reduce this anxiety by denying the success of the hypnosis, then White's results, as well as the observations described above, indicate that an increase in situational anxiety inhibits the induction of hypnosis.

A corollary to the above conclusion would be that a decrease in situational anxiety facilitates the induction of hypnosis. Some support for the corollary may be obtained from (a) induction procedures used in hypnosis and (b) the use of drugs in the induction of hypnosis.

The most widely accepted procedure adopted by hypnotists for inducing hypnosis is centered in an attempt to relax the subject before and during the hypnosis proper. In spite of the fact that the attempt to relax subjects before and during hypnosis is almost universal, there do not seem to be any data indicating the efficacy of this procedure as compared to some other procedure. Thus, the most that can be said in relation to the corollary is that present practice is consistent with it.

Of the vast amount of work done with drugs in recent years only very little has been done in relation to hypnosis, but that little is highly suggestive. Horsley (14) reports that the use of barbiturates facilitates the induction of hypnosis, reducing the amount of time necessary to achieve a certain level. Baernstein (1), using scopolamine, and Eysenck and Rees (10), using sodium amytal and nitrous oxide separately, report an increase in hypnotizability under drug as compared to placebo, when hypnotizability was measured by the postural sway test and the press-release test, respectively. They do not, however, report increased hypnotizability for all subjects but only for those subjects who were most responsive initially (without the drug). Ingham (18) reports that neurotic subjects who had taken sedatives the night before the testing were significantly more hypnotizable than non-sedated neurotics. Furthermore, the non-sedated neurotics were *not* significantly more hypnotizable than were normals.

Thus, we conclude that there is evidence that an increase in situational anxiety inhibits the induction of hypnosis, while a decrease in situational anxiety facilitates the induction of hypnosis. We would like to emphasize, however, that these conclusions are not supported by directly pertinent experimental data. The statements of Kline and of Sarason and Rosenzweig are derived from observation. The applicability of White's data to this paper depends upon an *a posteriori* inference by the writer. Horsley's work is observational, and our interpretation of the action of the various drugs as reducing situational anxiety need not be accepted by the reader. These observations and experiments are presented, not because they are the best in the field and clearly demand a conclusion but, rather, because they are the only ones and they do permit tentative con-

clusions. Where directly pertinent experimental data are lacking, observations and experiments of less than optimal pertinence are of some use in filling the gap.

If we accept the above data and the resulting conclusions as the best that are available, two sets of interesting speculations present themselves. First, Ingham's data indicate that the greater hypnotizability of neurotics as compared to normals and of the most neurotic as compared to the least neurotic may be a result of a drug usage which does not occur to an appreciable extent among normals and which is related to the degree of disturbance among neurotics. Such an interpretation would redefine, in terms of the effect of situational anxiety upon hypnotizability, those conclusions which were previously stated in terms of a relationship between personal anxiety or neuroticism, on the one hand, and hypnotizability, on the other hand. Clearly, Ingham's data are not definitive; alternative interpretations are easily available. The data are, however, suggestive.

The second set of speculations results from the finding of Baernstein and Eysenck and Rees that the several medications produced increased hypnotizability only for those subjects who were the most highly hypnotizable without medication. One interpretation which quickly comes to mind is that some people are hypnotizable and some people are not hypnotizable and that situational factors are operative only within the framework of more assertive personal factors, be they personal anxiety or personal sometning-else.

We conclude, therefore, that no final conclusions are warranted, but that there are several interesting possibilities.

REFERENCES

1. Baernstein, L. N. An experimental study of the effect on waking suggestibility of small doses of scopolamine hydrobromide. Unpublished M.A. thesis. Referred to in Hull, C. L., *Hypnosis and Suggestibility.* New York: Appleton, 1933. Pp. 99-101.
2. Bartlett, M. R. Suggestibility in psychopathic individuals. *J. gen. Psychol.*, 1936, **14**, 241-247.
3. ————————. Relation of suggestibility to other personality traits. *J. gen. Psychol.*, 1936, **15**, 191-196.
4. Benton, A. L., and Bandura, A. "Primary" and "secondary" suggestibility. *J. abnorm. soc. Psychol.*, 1953, **48**, 336-340.
5. Davis, L. W., and Husband, R. W. A study of hypnotic susceptibility in relation to personality traits. *J. abnorm. soc. Psychol.*, 1931, **26**, 175-182.
6. Eysenck, H. J. Suggestibility and hysteria. *J. Neurol. Psychiat.*, 1943, **6**, 22-31.
7. ————————. Suggestibility and hypnosis: an experimental analysis. *Proc. roy. Soc. Med.*, 1943, **36**, 349-354.
8. ————————. States of high suggestibility and the neuroses. *Am. J. Psychol.*, 1944, **57**, 406-411.
9. ————————. *Dimensions of personality.* London: Routledge & Kegan Paul, 1947.
10. ————————, and Rees, W. L. States of heightened suggestibility: Narcosis. *J. ment. Sci.*, 1945, **91**, 301-310.
11. Franks, C. M. An experimental study of conditioning as related to mental abnormality. Unpublished Ph.D. thesis. University of London, 1954. Reported in Eysenck, H. J. Reminiscence, drive, and personality theory. *J. abnorm. soc. Psychol.*, 1956, **53**, 328-333.

12. Heilizer, F. An exploration of the relationships between anxiety and certain indices of hypnotizability. Unpublished Ph.D. thesis. University of Rochester, 1958.
13. Himmelweit, H. T., Desai, M., and Petrie, A. An experimental investigation of neuroticism. *J. Personal.*, 1946, **15**, 173-196.
14. Horsley, J. S. Narcotic hypnosis. In L. M. LeCron (Ed.), *Experimental hypnosis*. New York: Macmillan, 1952. Pp. 141-149.
15. Ingham, J. G. Body-sway suggestibility and neurosis. *J. ment. Sci.*, 1954, **100**, 432-441.
16. ————. Psychoneurosis and suggestibility. *J. abnorm. soc. Psychol.*, 1955, **51**, 600-603.
17. Kline, M. V. Theoretical and conceptual aspects of psychotherapy. In M. V. Kline (Ed.), *Hypnodynamic psychology*. New York: Julian, 1955. Pp. 77-203.
18. Messer, A. L., Hinckley, E. D., and Mosier, C. I. Suggestibility and neurotic symptoms in normal subjects. *J. gen. Psychol.*, 1938, **19**, 391-399.
19. Sarason, S., and Rosenzweig, S. An experimental study of the triadic hypothesis: reaction to frustration, ego-defense, and hypnotizability. II. Thematic apperception approach. *Char. Personal.*, 1942, **11**, 150-165.
20. White, R. W. Prediction of hypnotic susceptibility from a knowledge of subject's attitude. *J. Psychol.*, 1937, **3**, 265-277.

EXPERIMENTAL AND CLINICAL STUDY OF HYPNOSIS IN THE SOVIET UNION AND THE EUROPEAN SOCIALIST COUNTRIES: BIBLIOGRAPHY[1]

D. Svorad, M.D., Ph.D., and J. Hoskovec, Ph.D.[2]

Pavlov's generally well known theory of hypnosis serves as the basis of studies on hypnosis in the Soviet Union and the European Socialist countries. As the findings of experiments and observations in this area are not so well known, we have tried to outline them in our bibliography and thus enable the reader to gain more adequate and complete information.

This bibliography contains papers on human and animal hypnosis, published over an approximate period of the last 40 years. It is not exhaustive but, on the other hand, does not omit any author who has worked intensively on this topic. Care was taken not to overlook any work of basic importance. Therefore, it can be considered representative.

Most of the references (about two thirds) consist of papers published during the last ten years. The following two factors were chosen for this construction of our bibliography: that more recent reports are based usually on older findings, and that references to the literature of the last years are more easily accessible.

About 70% of the references were to Soviet authors. Further data on Soviet literature can be found in the monographs of Bul (1958), Platonov (1957), and Kartamyshev (1953).

The titles of all papers, written in their national languages, are translated into English. The translation of the title of the references is followed by a note stating the original language in parentheses. This does not apply to the Russian titles.

The transliteration of the authors' names and the titles of sources of literature, originally in Russian, was made by the system used in Webster's New International Dictionary, corresponding closely to the system used by the Library of Congress. For abbreviations of the titles of sources of literature we used the system of UNESCO whenever possible. In every report the first and last pages were noted. The number of the volume was substituted by the number of the issue only in cases of unvolumed journals.

Practically the only theoretical basis of the entire study of hypnosis in the Soviet Union and the European Socialist countries was and is the theory of I. P. Pavlov. This theory, derived from physiological experiments, considers hypnosis to be a state of a definite form of central inhibition ("partial sleep") which is near, but not identical, to sleep (Pavlov 1923, 1927, 1928, 1941). It is known that this theory belongs to the "least favored at the present time by psychologists in English-speaking countries" (Pattie 1956). Some of the reasons for this were pointed out by Gorton (1957) in his critical analysis of Pavlovian theory. Others were mentioned by Das (1958), when discussing misunderstandings in

---

[1] Albania, Bulgaria, Czechoslovakia, Hungary, East Germany, Poland, and Rumania. (Yugoslavia was not included because the authors have at hand no complete survey of their literature in this field.)

[2] From the Czechoslovak Academy of Sciences, Institute of Physiology (Prague 6, Na. cvicisti 2), Slovak Academy of Sciences, Institute of Experimental Medicine (Bratislava, Sienkiewiczova I)—Dr. D. Svorad; and from the Psychological Laboratory of OSRI (Prague 3, Jerusalemska 9)—Dr. J. Hoskovec.

The authors wish to acknowledge their gratitude to Mrs. Eva Kalinova for her valuable participation and excellent linguistic help during the course of compilation of this bibliography.

the interpretation of this theory. And, considering the fact that most arguments against this theory are concerned with the problem of similarity or dissimilarity between sleep and hypnosis (see Weitzenhoffer 1953 and Gorton 1957) are there as yet enough reliable experimental facts with which to explain this relation? Is it necessary to consider Sears' (1956) assumption of the two continua from the waking state to hypnosis, and from the waking state to sleep? Considering all these facts, and moreover the methodological difficulties and complexity of the hypnotic phenomenon and its fluctuating physiological basis (Chertok and Kramarz, 1959), it will hardly be possible to find adequate reasons against perhaps only a single physiological theory of hypnosis today. Moreover, it is necessary to keep in mind hypnosis as a phenomenon which has not only its physiological, but also its psychological components. This means, of course, that we cannot expect a complete explanation of this phenomenon solely on a physiological basis, nor solely on a psychological basis.

The methodological problems of hypnosis, mentioned by Weitzenhoffer (1953), Gorton (1957), and Crasilneck and Hall (1959) are the questions of objective criteria of hypnosis, waking, posthypnotic states and "neutral" hypnotic controls of methods of induction of hypnosis, and problems of presenting emotionally equivalent stimuli to different subjects, etc. All these difficulties are present whenever hypnosis is studied, either from the physiological or the psychological standpoint. These are the difficult considerations in the study of this phenomenon and we can find them therefore also in the papers which are based on Pavlov's theory.

REFERENCES

1. Chertok, L., and Kramarz, P. Hypnosis, sleep, and electroencephalography. *J. nerv. ment. Dis.*, 1959, **128**, 227-238.
2. Crasilneck, H., and Hall, J. Physiological changes associated with hypnosis: a review of the literature since 1948. *Int. J. clin. exp. Hyp.*, 1959, **7**, 9-50.
3. Das, J. The Pavlovian theory of hypnosis: an evaluation. *J. ment. Sci.*, 1958, **104**, 82-90.
4. Gorton, B. The physiology of hypnosis. A review of the literature. *J. Am. Soc. psychosom. Dent.*, 1957, **4**, 86-103, 132-140; 1958, **5**, 20-48.
5. Pattie, F. Theories of hypnosis. In R. M. Dorcus (Ed.), *Hypnosis and its therapeutic applications.* New York: McGraw-Hill, 1956.
6. Pavlov, I. Inhibition, hypnosis, and sleep. *Brit. med. J.*, 1923a, 256-257.
7. ————. The identity of inhibition with sleep and hypnosis. *Sci. Monthly*, 1923b, **17**, 603-608.
8. ————. *Conditioned reflexes.* Oxford: University Press, 1927.
9. ————. *Lectures on conditioned reflexes*, Vol. I. (Trans. W. H. Gantt). New York: International University Press, 1928.
10. ————. *Lectures on conditioned reflexes*, Vol. 2. (Trans. W. H. Gantt). New York: International University Press, 1941.
11. Weitzenhoffer, A. *Hypnotism: an objective study in suggestibility.* New York: Wiley, 1953.

BIBLIOGRAPHY

1. Amfieatrov, L. Hypnotic anesthesia during induced abortion. *Akush. Gin.*, 1936, nos. 4-6, 399-405.
2. Avakyan, R., and Felderbaum, R. Study of the function of the auditory analyser in cases of suggested deafness. *Zh. vyssh. nervn. Deyat.*, 1957, **7**, 637-641.

3. Bekhterev, V. What is hypnosis? *J. abn. Psychol.*, 1906, **1**, 18-25.
4. ————. *Hypnosis, suggestion, and psychotherapy: their therapeutic importance.* Petrograd, 1911.
5. Belkin, A. The influence of hypnotic suggestion on the activity of the artificial digestive canal. In Lebedinskii, M. (Ed.), 81-84.
6. Berg, S. Hypnosis in surgery. *Vrach. Delo.*, 1926, **9**, 24-26.
7. Bezyuk, N. Concerning the hypnosuggestive treatment of cutaneous pruritus. *Vrach. Delo.*, 1939, **21**, 397-400.
8. Biermann, B. Hypnotism in the light of the theory of conditioned reflexes. *J. Psychol. Neurol.*, 1929, **38**, 265-281.
9. Birman, B. *Experimental sleep.* Leningrad: GIZ, 1925.
10. ————. The role of hypnotic and sleep inhibition in the pathogenesis of the treatment of neurotic syndromes. *Zh. vyssh. nervn. Deyat.*, 1951, **1**, 67-74.
11. ————. An attempt at clinical and physiological estimation of types of higher nervous activity. *Zh. vyssh. nervn. Deyat.*, 1951, **1**, 879-888.
12. Biryukov, D. *Contribution to Pavlov's theory.* (In Czech.) Praha: State Health Publishing House, 1952.
13. ————. Some remarks on the evolution of conditioned inhibition. *Fiziol. Zh. SSSR*, 1957, **43**, 286-289.
14. Blinkova, T. Concerning the problem of different conditions of the establishment of cataleptic inhibition. In Biryukov, D., (Ed.) *Ezhegod. inst. eksp. med.*, 72-76. Leningrad: Academy of Medical Sciences, 1958.
15. Bogolepov, N. Hypnosis and the vegetative system. *Sov. vrach. Zh.*, 1936, **40**, 1082-1088.
16. Bul, P. *The technique of medical hypnosis.* Leningrad: Medgiz, 1955.
17. ————. *Hypnosis and suggestion in the clinic of internal diseases.* Leningrad: Medgiz, 1958.
18. ————. An attempt to use hypnotherapy in the treatment of bronchial asthma. In Lebedinskii, M., (Ed.), 237-244.
19. Bulatov, P. *Current methods of treatment for bronchial asthma.* Moskva: Medgiz, 1954.
20. Bunin, K., and Sinitsyn, P. An attempt to treat hypertensive disease by suggested sleep. *Sov. Med.*, 1951, no. 10, 20-23.
21. Charvat, J. Suggestibility: its onset and conditions. (In Czech.) *Cas. Lek. ces.*, 1922, **61**, 805-811.
22. Chistovich, A. An attempt to explain some disorders of speech in psychosis physiologically by hypnotic experiment. *Tr. Inst. Fiziol. Pavlova*, 1952, **1**, 425-435.
23. Chugonov, S. *Clinical electroencephalography.* Moskva: Medgiz, 1950.
24. Dolin, A. Objective investigation of the elements of individual experience through experimental hypnosis. *Arkh. biol. Nauk.*, 1934, **36**, 28-52.
25. ————. Hypnosis. In *Bolsh. sov. encikl.* (2nd ed.), 11, 403-405. Moskva: Gos. nauch. izd., 1950.
26. Donath, G. Treatment of stuttering by hypnosis. (In Hungarian.) *Gyogyaszat*, 1928, **68**, 1085.
27. ————. Further observations concerning stuttering and its hypnotic treatment. *Ther. Gegenw.*, 1932, **73**, 456-458.
28. Dubnikov, E. Concerning the question of curing an eczema of neurotic origin through hypnosis. *Ther. Gegenw.*, 1932, **73**, 403-406.
29. ————. Two cases of metrorrhagia cured by hypnotherapy. *Akush. Gin.*, 1936, no. 8, 998-1000.
30. Dumova, A. M. Changes in conditioned and unconditioned vasomotor reflexes in patients with dermatologic disease during the hypnotic state. *Vestn. Vener. Dermat.*, 1954, **4**, 22-25.

31. ————————. Conditioned and unconditioned vasomotor reflexes in patients with dermatologic diseases during the hypnotic state. *Vestn. Vener. Dermat.*, 1955, **5**, 545-547.

32. Fedorov, V. Concerning the possibilities of an extensive use of hypnosis in abortion. *Tr. I. Leningr. med. Inst.*, 1925, **1**, 176-185.

33. Gakkebush, V. Study of the development of personality by hypnotic inhibition. *Sovrem. Psikhonevrol.*, 1928, **7**, 272-277.

34. ————————, Polinkovskii, S., and Fundiller, I. An attempt to study the development of personality by hypnosis. *Tr. Inst. Psikhonevrol.*, 1928, **7**, 272-277.

35. Gefter, A., and Efimov, A. Hypnotic treatment of pain in the region of the heart. *Terap. Arkh.*, 1955, **27**, 21-27.

36. Gelina, L. *Psychotherapy and hypnosis in the practice of a children's department of the psychoneurologic hospital.* Moskva: Medgiz, 1954.

37. Gembitskii, E. An attempt to use hypnotic treatment in the clinic for internal diseases. *Sov. Med.*, 1958, **22**, 69-74.

38. Godlewski, J., and Palester, M. The treatment of hypertensive disease by sleep induced by suggestion. (In Polish.) *Pol. Tyg. lek.*, 1955, **10**, 539.

39. Gorbatsevich, A. The study of different stages of hypnotic inhibition and the method of their estimation. *Fiziol. Zh. SSSR*, 1954, **40**, 148-154.

40. Gordova, T., and Kovalev, N. Concerning some special methods of hypnotic treatment in cases of chronic alcoholism. In Lebedinskii, M., (Ed.), 219-225.

41. Gotsev, T. Physiology of the nervous system and of the analysers. (In Bulgarian.) *Sofia Drzhavno izdat. Nauka i izkustvo*, 1956.

42. Grimsk, L. Evocation of emotional states in parachutists during hypnosis. *Vopr. Psikhol.*, 1959, **5**, 139-142.

43. Gurevich, G., and Mastbaum, I. Psychotherapeutic method for preoperative preparation. *Khirurgiya*, 1952, no. 10, 12-16.

44. Horvai, I. Hypnosis. (In Czech.) In *Encykl. prakt. Lek.*, **8**, 728. Praha: SZdN, 1954.

45. ————————. Hypnosis in Soviet Medicine. (In Czech.) *Sov. Veda-Lek.*, 1956, **6**, 257-266.

46. ————————. *Hypnosis in medicine.* (In Czech.) Praha: SZdN, 1959.

47. Hoskovec, J. The possibilities of hypnosis and suggestion as a research method in psychology. (In Czech.) *Ceskoslov. Psychol.*, 1958, **2**, 147-154.

48. Iancu, I. Hypnosis. (In Rumanian.) *Stiinta si Technica*, 1956, **8**, 7-9.

49. Ingster, A. On the effectiveness of treatment of neurosis by prolonged hypnosis after W. E. Rozhnov. (In Polish.) *Neurol. Neurochir. Psychiat. Polska*, 1955, **5**, 689-693.

50. Ivanov, N. Concerning the article of Prof. F. K. Menshikov and A. B. Malenkovich, "Observations of hypnotherapy at the clinic of internal diseases." *Terap. Arkh.*, 1953, **25**, 90-91.

51. ————————. Hypnotherapy at the clinic of internal diseases. *Terap. Arkh.*, 1955, **27**, 34-38.

52. Ivanov-Smolenskii, A. An attempt to mechanize the application of hypnosis. *Vrach. Delo.*, 1928, **11**, 221-224.

53. Kannabikh, Yu. Hypnotism. In *Bolsh. med. encikl.*, Moskva, 1929, **7**, 142-154.

54. ————————. The part played by hypnosis in the system of Soviet psychotherapy and psychohygiene. *Soviet. Nevropat., Psikhoter., Psikhogig.*, 1934, **3**, 50-60.

55. Karmanova, I. The analysis of experimental catalepsy in cocks. In Biryukov, D. A., (Ed.), *Ezhegod. inst. eksp. med.*, Leningrad, AMN, 1956, 77-83.

56. ————————. Opticogenic experimental catalepsy of cocks. Problems of comparative physiology and pathophysiology of nervous activity. In Biryukov, D. A., (Ed.), *Probl. sravenitel noi fiziol. nervn. deyat.*, Leningrad, AMN, 1958, 17-27.

57. Kartamischew, A. Hypnotherapy in the case of eczema and psoriasis. *Dermatol. Wschr.*, 1936, **102**, 260-263.

58. ————. Treatment of lichen ruber planus by means of hypnosis. *Dermat. Wschr.*, 1933, **96**, 788-791.

59. ————. *Hypnosis in dermatology.* Tashkent., Gosizdat uzbeck. SSR, 1936.

60. ————. Treatment of some skin diseases by suggestion during hypnotic sleep. *Vestn. Vener. Dermat.*, 1951, no. 5, 7-12.

61. ————. *Hypnosis and suggestion in the treatment of skin diseases.* Moskva: Medgiz, 1953.

62. Kharmandaryan, F., Platonov, K., and Bezchiskaya, N. Emotions and their influence on the functional state of the stomach by using the x-ray suggestive method. *Klinich. Med.*, 1933, **11**, 21-27.

63. Kleinsorge, H. The hypnotic treatment of cardiospasm. *Arztl. Wschr.*, 1948, **3**, 634.

64. ————, and Klumbies, G. *Psychotherapy in the clinic and in private practice.* Munich, Berlin: Urban und Schwarzenberg, 1959.

65. Klumbies, G. Success of hypnosis in cases of organic disease. *Dtsch. Gesundheitswes.*, 1951, **6**, 197.

66. ————. Ablation hypnosis. *Psychoth. med. Psychol.*, 1952, **2**, 221-229.

67. ————. Investigations of the nature of hypnosis. In *Arbeitstagung über kortikoviszerale Regulation.* Berlin: Volk und Gesundheit, 1955, 274-281.

68. Korotkin, I. The influence of verbal stimuli as conditioned inhibition during waking and hypnotic state. *Tr. Inst. Fiziol. Pavlova*, 1952, **1**, 345-355.

69. ————, Mityushov, M., and Suslova, M. The influence of hypnotic suggestion on the regulation of the sugar level in the blood in comparison with changes of conditioned and unconditioned eye blinking reflexes under these conditions. In *Nacuh. konfer. posvjash. 40-i godovsh. Vel. oct. soc. rev. Tez. dokl.*, Leningrad, 1957, 53-54.

70. ————, and Suslova, M. Investigation of higher nervous activity in patients during the somnambulistic phase of hypnosis. *Zh. vyssh. nervn. Deyat.*, 1951, **1**, 617-622.

71. ————, and ————. An investigation of higher nervous activity in the somnambulistic phase of hypnosis during different depths of hypnotic sleep. *Fiziol. Zh. SSSR.*, 1953, **39**, 423-431.

72. ————, and ————. On the physiological mechanism of inhibitory action of stimuli inhibited by hypnotic suggestion. *Dokl. Akad. Nauk. SSSR*, 1953, **39**, 423-431.

73. ————, and ————. Concerning some characteristics of the reciprocal influence of the signal systems in hypnotic and post-hypnotic states. *Zh. vyssh. nervn. Deyat.*, 1955, **5**, 511-519.

74. ————, and ————. Materials for the investigation of the nervous mechanism of post-hypnotic states in hysterics. *Zh. vyssh. nervn. Deyat.*, 1955, **5**, 697-707.

75. ————, and ————. Change of conditioned and unconditioned reflexes after suggestion in the second phase of hypnosis. *Zh. vyssh. nervn. Deyat.*, 1956, **6**, 370-377.

76. ————, and ————. Change of conditioned and unconditioned reflexes in suggested states during hypnosis. *Tr. Inst. Fiziol. Pavlova*, 1956, **5**, 267-277.

77. ————, and ————. Changes of higher nervous activity in hypnosis with verbal exclusion of the conditioned stimulus. *Tr. Inst. Fiziol. Pavlova*, 1956, **5**, 278-287.

78. ————, and ————. Changes of higher nervous activity in hypnosis with verbal exclusion of the unconditioned stimulus. *Tr. Inst. Fiziol. Pavlova*, 1956, **5**, 288-298.

79. ————, and ————. An investigation of post-hypnotic changes in conditioned and unconditioned reflexes resulting from suggestion made in the first phase of hypnosis. *Zh. vyssh. nervn. Deyat.*, 1957, **7**, 889-897.

80. ————, and ————. Investigation of inhibition suggested during hypnosis on verbal stimuli with and without meaning. *Zh. vyssh. nervn. Deyat.*, 1958, **8**, 820-827.

81. ————, and ————. The physiological analysis of the nervous mechanism of the influence of suggestion during hypnosis. In Lebedinskii, M. S., (Ed.), 57-62.

82. Krakora, B. The electroencephalogram during drowsiness, sleep, and hypnosis. (In Czech.) *Neurol. Psychiat. Ceskoslov.*, 1953, **16**, 141-154.

83. Krasnogorskii, N. Infra-red radiation from the body in children during hypnotic (dissociated) states of the cerebral cortex. *Zh. vyssh. nervn. Deyat.*, 1951, **1**, 376-382.

84. Kravkov, S. *Suggestion (psychology and pedagogics of suggestion).* Moskva: Rusk. knigovnik, 1924.

85. Kreimar, A. Hypnotherapy in hypertensive disease. *Klinich. Med.*, 1954, **32**, 65-67.

86. Kuchina, J., and Tsines, A. Contribution to the question of the relation between vagotomy and suggestibility. *Sovet. Nevropat. Psikhoter. Psikhogig.*, 1932, **1**, 399-401.

87. Kuravitskii, V. Concerning the problem of the nature of hypnotic analgesia: a case of delivery in the hypnotic state. *Vrach. Delo.*, 1928, **11**, 62.

88. ————. Pathophysiology of hallucinations and other disorders of perception in the light of the hypnotic experiment. *Nevropat. Psikhiat.*, 1939, **8**, 50-52.

89. Lebedinskii, M., (Ed.) *Problems of psychotherapy.* Moskva: Medgiz, 1958.

90. Levin, S. Concerning peculiarities of the influence of conditioned reflexes during hypnotic state in children. *Fiziol. Zh. SSSR*, 1934, **17**, 196-206.

91. ————, and Egolinskii, I. The effect of cortical function upon energy changes in the basal metabolism. *Fiziol. Zh. SSSR*, 1936, **20**, 979-992.

92. Levin, Yu. The influence of conditioned reflex stimuli in the waking and hypnotic states on the secretion of the stomach in man before and after vagotomy. In Lebedinskii, M. S., (Ed.), 78, 80.

93. Lezovic, J. Hypnosis in stomatology. (In Slovak.) *Ceskoslov. Stomatol.*, 1955, **2**, 54-56.

94. Liberson, G. Vegetative reflexes in hypnotic conditions. *Zh. Nevropat. Psikhiat.*, 1929, **22**, 189-195.

95. Lisica, F. The influence of hypnosis on the association experiment and the motor chronaxie in chronic alcoholism. In Lebedinskii, M. S., (Ed.), 71-75.

96. Litvinenko, G. The problem of the use of hypnosis in obstetrics and gynecology. *Acush. zhen. Bolez*, 1928, **39**, 255-256.

97. Livanov, M., Strelchuk, I., and Melekhova, A. Electroencephalographic studies of the interaction of the first and second signal systems in hypnosis. *Sixteenth conference on higher nervous activity: Abstract of reports.* Moscow, 1953, 123-125.

98. Maiorov, F. Concerning the physiologic characteristics of the somnambulistic phase of hypnosis. *Fiziol. Zh. SSSR*, 1950, **36**, 649-652.

99. ————. An investigation of higher nervous activity in hypnotic states. In Bykov, K. (Ed.), *Tr. 15-go soc. po. probl. vyssh, nervn. deyat., posv. 50-let. uch. Pavlova.* Moskva, Leningrad: 1952, 166-183.

100. ————, and Suslova, M. An investigation of experimental regression of speech in hypnosis. *Zh. vyssh. nervn. Deyat.*, 1951, **1**, 479-484.

101. ————, and ————. Hypnotic experiments with suggested age. *Tr. Inst. Fiziol. Pavlova*, 1952, **1**, 290-295.

102. Marchand, H. Discussion contribution. In *Arbeitstagung über kortikoviszerale Regulation.* Berlin: Volk und Gesundheit, 1955, 195-197.

103. ————. About vegetative pressure tests in the case of hypnotized subjects. *Medizinische*, 1956, no. 11, 382-385.

104. Marenina, A. An investigation of the dynamics of human sleep by measuring the electrical skin resistance. *Tr. Inst. Fiziol. Pavlova*, 1952, **1**, 316-319.

105. ————. An investigation of the dynamics of sleep by measuring skin potentials. *Tr. Inst. Fiziol. Pavlova*, 1952, **1**, 320-324.

106. ————. EEG study of natural and hypnotic sleep in man. *Tr. Inst. Fiziol. Pavlova*, 1952, **1**, 325-332.

107. ————. EEG study of the somnambulistic phase of hypnosis. *Tr. Inst. Fiziol. Pavlova*, 1952, **1**, 333-338.

108. ————. Further investigation of the dynamics of brain potentials in different hypnotic states in man. *Fiziol. Zh. SSSR*, 1955, **41**, 742-747.

109. ————. Changes in the cerebral potentials in different phases of hypnosis in man. *Tr. Inst. Fiziol. Pavlova*, 1956, **5**, 299-306.

110. ————. Changes of the cerebral potential under the influence of extinguishing stimuli during different stages of hypnosis. *Tr. Inst. Fiziol. Pavlova*, 1957, **6**, 330-334.

111. Marinesco, G., Sager, O., and Kreindler, A. Electroencephalographic studies: natural sleep and hypnotic sleep. (In French.) *Bull. Acad. Med.*, 1937, **117**, 273-276.

112. Martyshin, M. *Sleep, dreams, and hypnosis.* Kuibyshev, 1952.

113. Menshikov, F., and Malenkovich, A. The use of hypnotherapy at the clinic of internal diseases. *Terap. Arkh.*, 1953, **25**, 6-10.

114. Moravek, M. Some further methods of examining higher nervous activity in man; hypnosis (hypnosuggestion) as a research method of higher nervous activity of man. (In Czech.) *Sov. Veda-Lek.*, 1954, **4**, 465-467.

115. ————. *Concerning the theory of the signal systems.* (In Czech.) Praha: SZdN, 1957.

116. Mueller-Hagemann, D. Some modifications of autogenic training. *Nervenarzt*, 1956, **27**, 266-270.

117. ————. *Psychotherapy: a guide for physicians and students.* Berlin: Volk und Gesundheit, 1957.

118. ————. Autogenic training. In Radetzky, H., and Thiele, H. (Ed.) *Modern neurologic-psychiatric therapy.* Berlin: Volk und Gesundheit, 1959, 122-125.

119. Narbutovich, I. Investigation into the selectivity of rapport in hypnosis. In Lebedinskii, M. S., (Ed.), 76-77.

120. Nemtseva, V. Hypnosis in animals. *Uchen. zap. Leningrad. gos. ped. inst. Gercena*, 1958, **153**, 359-367.

121. Nemtsova, O., and Shattenstein, D. The effect of the central nervous system on some physiologic processes during work. *Fiziol. Zh. SSSR*, 1936, **20**, 581-593.

122. Nevskii, I., and Levin, S. Conditioned and unconditioned secretion activity in children during hypnosis. *Kazan. med. Zh.*, 1932, **28**, 343-351.

123. Nevskii, M. Cerebral bio-electrical activity during hypnotic sleep. *Zh. Nevropat. Psikhiat.*, 1954, **54**, 26-32.

124. ————. EEG study of hypnosis in man. *Vopr. klin. Nevropat. Psikhiat. (Chelyabinsk)*, 1958, 217-221.

125. ————. Electrical brain activity in different stages of hypnosis. *Vopr. klin. Nevropat. Psikhiat. (Chelyabinsk)*, 1958, 223-224.

126. ————. Electrical brain activity in natural sleep. *Vopr. klin. Nevropat. Psikhiat. (Chelyabinsk)*, 1958, 235-242.

127. ————. Comparative analysis of phasic changes of electrical activity of the brain during hypnotic and natural sleep. *Vopr. klin. Nevropat. Psikhiat. (Chelyabinsk)*, 1958, 243-250.

128. ————. Dynamics of bioelectrical activity of the brain in hypnotic therapy and its clinical importance. In Lebedinskii, M. S., (Ed.), 62-71.

129. Nikolaev, A. *The relation between the theory of I. P. Pavlov and the problems in obstetrics and gynecology.* Moskva: Medgiz, 1951.

130. Noshcenko, G. An attempt to use a directed suggestive intervention on the functional interrelation of the first and second signal systems in hysteria during hypnosis. *Zh. vyssh. nervn. Deyat.*, 1956, **6**, 672-679.

131. Oberreich, L. Hypnosis in dentistry. *Dtsch. Stomatol.*, 1957, **7**, 371-372.

132. Oles, M. Autogenic training in the case of children and adolescents. *Psych. Neurol. med. Psychol.*, 1956, **8**, 72-76.

133. Osipov, N. Hypnosis. (In Czech.) *Revue Neurol. Psychiat.*, 1929, **26**, 179.

134. Paikin, M. Concerning the question of application of hypnosuggestive therapy in the case of hyperemesis gravidarum. *Z. Psychother.*, 1929, **2**, 273-280.

135. Papp, Z. Effects of mescaline intoxication (delirium) on post-hypnotic illusion. (In Hungarian.) *Orv. Hetil.*, 1936, **80**, 75-78.

136. Pavlov, B., and Povorinskii, Yu. Concerning the problem of interrelation between the first and second signal systems in the somnambulistic phase of hypnosis. *Zh. vyssh. nervn. Deyat.*, 1953, **3**, 381-392.

137. ————, ————, and Bobkova, V. Concerning the problem of interrelation between the first and second signal systems in the somnambulistic phase of hypnosis. *.Zh. vyssh. nervn. Deyat.*, 1955, **5**, 11-18.

138. Pavlov, I. The so-called animal hypnosis. *Poln. sobr. soch.* (2nd ed.), Moskva, Leningrad, AN, 1951, **3**, 1, 359-360.

139. ————. A contribution to the physiology of the hypnotic state in the dog. *Poln. sobr. soch.* (2nd ed.), Moskva, Leningrad, AN, 1951, **3**, 2, 133-144.

140. ————. The conditioned reflex. *Poln. sobr. soch.* (2nd ed.), Moskva, Leningrad, AN, 1951, **3**, 2, 330-331.

141. ————. A discussion concerning the problem of sleep. *Poln. sobr. soch.* (2nd ed.), Moskva, Leningrad, AN, 1951, **3**, 2, 426-427.

142. Pekarek, L. The use of hypnosis in psychiatry. (In Czech.) *Cas. lek. ces.*, 1948, **87**, 700.

143. ————. Hypnosis. (In Czech.) In Charvat, J., (Ed.), *Repet. prakt. lek.* Praha: SZdN, 1955, 769-771.

144. Platonov, K. *Hypnosis and suggestion in practical medicine.* Kharkov, 1925.

145. ————. The theory of the nature of hypnosuggestive psychotherapy. *Sovrem. Psikhonevrol.*, 1926, **3**, 132-140.

146. ————. *The word as a physiologic and therapeutic factor: Concerning the physiology of psychotherapy.* Kharkov, 1930.

147. ————. Concerning the objective proof of the experimental personality age regression. *J. gen. Psychol.*, 1933, **9**, 190-209.

148. ————. The treatment of toxic vomiting of pregnant women by suggestion. In Bykov, K. M., (Ed.) *Probl. kortiko-visceralnoi patol.* Moskva: Medgiz, 1949, 369-375.

149. ————. *Suggestion and hypnosis in the light of the theory of I. P. Pavlov.* Moskva, 1952.

150. ————. The theory of the importance of hypnotic sleep inhibition as a therapeutic means in the treatment of some pathological states of man. *Zh. vyssh. nervn. Deyat.*, 1952, **2**, 317-325.

151. ————. *The word as a physiologic and therapeutic factor.* Moskva: Medgiz, 1957.

152. ————. Hypnosis. In *Bolsh. med. encikl.* (2nd ed.) Moskva: *Gos. nauch. izd.*, 1958, **7**, 180-188.

153. ————. The problem of the present state of physiologic bases of psychotherapy and the limits of its use. In Lebedinskii, M. S., (Ed.), 20-33.

154. ————, and Matzevich, A. Hypnosis and the nervous system under the influence of alcohol. *Tr. ukr. psikhonevrol. Inst. (Kiev)*, 1931, **15**, 93-106.

155. ————, and Prikhodivnii, E. Objective evidence of experimental changes of personality by suggestion. *Tr. ukr. psikhonevrol. Inst. (Kiev)*, 1930, **14**, 191-203.

156. ————, and Shestopal, M. *Suggestion and hypnosis in obstetrics and gynecology.* Kharkov: Gosizdat Ukrainy, 1925.

157. ————, and Velvovskii, G. The problem of the use of hypnosis in surgery, obstetrics, and gynecology. *Vrach. Delo.*, 1924, **7**, 353-356.

158. Podyapolskii, P. The successful use of hypnotic suggestion in child chorea. *Klin. Zh. saratov. Univers.*, 1928, **6**, 51-56.

159. Povorinskii, Yu. The importance of using hypnosis in the preparation for surgical operations. *Zh. Usoversh. Vrachei*, 1928, **12**, 757-762.

160. ————. Changes of cutaneous vasomotor reactions in the hypnotic state following the application of direct and verbal stimuli. *Zh. Nevropat. Psikhiat.*, 1953, **53**, 854-860.

161. ————, Bobkova, V., and Pavlov, B. Bioelectrical activity of the brain in the study of the interrelation between the first and second signal systems during the hypnotic state: Abstracts of reports. *Scientific session on problems of clinical electroencephalography.* Moscow, 1955, 51-52.

162. ————, and Traugott, N. Some peculiarities of cortical dynamics in hypnotic sleep. *Arkh. biol. Nauk*, 1936, **44**, 5-22.

163. Purkyne, J. Waking, sleep, dreams, and related conditions. In Purkyne's *Opera omnia*, Vol. III. Praha: Spol. lek. ces., 1939.

164. Rodionova, A., and Aronina, R. An attempt to treat patients with hypertensive disease by hypnosis. *Sov. Med.*, 1955, **19**, 65-69.

165. Rogov, A., Gorlanova, T., Pervov, L., and Shraiber, Ya. Change of conditioned and unconditioned vascular reflexes in man during hypnotic state. *Tr. Inst. Fiziol. Pavlova*, 1956, **5**, 368-378.

166. Rokhlin, L. *Sleep, hypnosis, and dreaming in the light of I. P. Pavlov's theory.* Moskva: Medgiz, 1952.

167. ————. Sleep, hypnosis, and dreaming in the light of Pavlov's theory. (In Albanian). Tiranë, 1956.

168. Roth, B. *Narcolepsy and hypersomnia from the aspect of the physiology of sleep.* (In Czech.) Praha: SZdN, 1957.

169. Rozhnov, V. Therapeutic efficiency of suggestion in deep hypnotic sleep. *Zh. Nevropat. Psikhiat.*, 1953, **53**, 462-464.

170. ————. *Hypnosis in medicine.* Moskva: Medgiz, 1954.

171. ————. The problem of physiologic peculiarities of hypnotic sleep during its different stages of depth. In Lebedinskii, M. S., (Ed.), 46-57.

172. Rudolph, W. Concerning the technique of hypnosis. *Dtsch. Gesundheitsw.*, 1958, **13**, 1347.

173. Rusetskii, I. The investigation of vegetative reflexes during hypnotic sleep. *Vrach. Delo.*, 1930, **13**, 1290-1293.

174. Shazillov, B., and Abramov, N. About the effect of hypnosis on the relationship of the K- and CA- electrolytes in the blood serum. *Z. ges. Neurol. Psychiat.*, 1928, **112**, 54-59.

175. Shishkova, V., and Ivanov, I. An investigation of the mechanisms of the higher nervous activity during the psychoprophylactic preparation for delivery. *Zh. vyssh. nervn. Deyat.*, 1953, **3**, 816-827.

176. Smetnev, A. Treatment of hypertensive disease by hypnotic sleep. *Terap. Arkh.*, 1956, **28**, 18-26.

177. Strelchuk, I. Experimental study of differentiated hypnotherapeutic influence in the light of I. P. Pavlov's theory of two signal systems. *Zh. vyssh. nervn. Deyat.*, 1953, **3**, 353-367.

178. Stuchlik, J. Association experiment in hypnosis. (In Czech.) *Revue Neurol. Psychiat.*, 1918, **15**, 265-288.

179. ————. The psychological nature of suggestion and of hypnotic phenomena. (In Czech.) *Cas. Lek. ces.*, 1921, **60**, 100-101.

180. ————. Suggestibility and typology. (In Czech.) *Cas. Lek. des.*, 1946, **85**, 1773-1781.

181. Sumbaev, I. The influence of drugs on hypnotic sleep. *Sovet. Nevropat. Psikhoter. Psikhogig.*, 1935, **4**, 83-94.

182. Suslova, M. Experimental investigation on the dynamics of hypnotic sleep in man. *Fiziol. Zh. SSSR*, 1940, **29**, 144-150.

183. ————. Investigation of the working ability of the cerebral cortex in the somnambulistic phase of hypnosis. *Tr. Inst. Fiziol. Pavlova*, 1952, **1**, 296-302.

184. ————. Investigation of the working ability of the cerebral cortex in the somnambulistic phase of hypnosis: Second communication. *Tr. Inst. Fiziol. Pavlova*, 1952, **1**, 303-315.

185. ————. The effect of deep somnambulistic sleep on the working ability of the cerebral cortex. *Tr. Inst. Fiziol.*, 1956, **5**, 259-266.

186. Svorad, D. Contribution to the physiological study of reflex inhibition (the so-called animal hypnosis.) Analysis of the stimuli applied to achieve reflex inhibition. *Physiol. bohemoslov.*, 1954, **3**, 217-233.

187. ————. The task of the vestibular apparatus, the proprioception, and the exteroception of the skin at the onset and during the state of reflex inhibition. *Physiol. bohemoslov.*, 1954, **3**, 260-271.

188. ————. The mechanism of the reflex inhibition in the aspect of evolution. *Physiol. bohemoslov.*, 1954, **3**, 406-413.

189. ————. Influencing reflex inhibition through stimulation and inactivating of telereceptors on different phylogenetic levels. *Physiol. bohemoslov.*, 1955, **4**, 155-159.

190. ————. *Paroxysmal inhibition. (An experimental analysis of 'animal hypnosis').* (In Slovak.) Bratislava: SAV, 1956.

191. ————. 'Animal hypnosis' (Totstellreflex) as experimental model for psychiatry. *AMA Arch. Neurol. Psychiat.*, 1957, **77**, 533-554.

192. ————. Reticular activating system of brain stem and 'animal hypnosis'. *Science* (Lancaster, Pa.), 1957, **125**, 156.

193. ————. Changes in the topographic distribution of glycogen in the brain during animal hypnosis. *Nature*, 1958, **181**, 775-776.

194. ————. Concerning the metabolic difference (variation) in animal hypnosis, relaxing sleep, cold, numbness, and hibernation. *Naturwiss.*, 1958, **45**, 96.

195. ————. The question of 'inhibition susceptibiilty.' (Inhibition susceptibility I.) *Physiol. bohemoslov.*, 1958, **7**, 341-347.

196. ————. Typology of rats according to inhibition susceptibility. (Inhibition susceptibility II.) *Physiol. bohemoslov.*, 1958, **7**, 348-355.

197. Svyadoshch, A. Hypnosis in the pre- and postoperative period. *Ortoped. Traumatol.*, 1938, **12**, 71-77.

198. Tokarskii, A. *The therapeutic value of hypnotism.* Moskva: 1890.

199. Tonkonogii, I., and Miskevich, E. An attempt to use hypnosis in the treatment of skin diseases. In Lebedinskii, M. S., (Ed.), 299-305.

200. Tulenev, N. Psychological phases of stomach secretion in hypnotized subjects. *Medich. Zh.*, 1936, **6**, 187-200.

201. Vasilevskii, V., and Kagan, E. The influence of hypnosuggestion on the function of the organism at work and at rest. *Fiziol. Zh. SSSR*, 1935, **19**, 79-92.

202. Velvovski, I. The physiological theory of I. P. Pavlov in psychiatry and neuropathology. In Banshchikov, V. M., and Kovalov, N. Y., (Ed.), *Fiziol. uschenie Pavlova v psikhiatrii i nevropathologii.* Moskva: Medgiz, 1952, 172-175.

203. Vesely, L. EEG recordings of the hypnotic state. (In Czech.) *Neurol. Psychiat. ceskoslov.*, 1950, **13**, 210-219.

204. Vondracek, V. Suggestion. (In Czech.) *Cas. Lek. ces.*, 1944, **83**, 800-803, 830-835.

205. Völgyesi, F. *Hypnotherapy in medicine: Its use and present status.* (In Hungarian.) Budapest: 1920.

206. ————. *Hypnotherapy in organic and mental diseases.* (In Hungarian.) Budapest: 1933.

207. ————. Psychic graduality and progressive cerebration. *Zbl. Psychother.*, 1935, **8**, 20-41.

208. ————. Human and animal hypnosis. Zurich, 1938.

209. ————. Hypnosis and the cerebral mystery. (In French.) Paris: Vigot Frères, 1944.

210. ————. *Hypnotherapy and psychosomatic problems.* Stuttgart: Hippokrates-Verlag, 1950.

211. ————. The recent neuropsychiatric and biomorphologic justifications of hypnotherapeutic empiricism. *Brit. J. med. Hypnot.*, 1950, **2**, 6-25.

212. Wendt, H. Contributions to the pathogenesis and therapy of enuresis nocturna. *Psychiat. Neurol. med. Psychol.*, 1952, **4**, 48-53.

213. ————. Hypnotherapy. In Radetzky, H., and Thiele, H. (Ed.). *Moderne neurologisch-psychiatrische Therapie.* Berlin: Volk und Gesundheit, 1959, 130-133.

214. Wipperman, G. Contribution to the discussion of the work of Dr. L. Obereich, 'Hypnosis in dentistry.' *Dtsch. Stomatol.*, 1958, **8**, 361-363.

215. Wundt, W. *Hypnotism and suggestion.* Leipzig, 1911.

216. Zdravomyslov, V. *Attempt to use hypnosis in obstetrics and gynecology.* Moskva: Medgiz, 1930.

217. ————. Painless delivery by suggestion. Moskva: Medgiz, 1956.

218. Zheltakov, M. Protective inhibition, hypnosis, and therapeutic sleep in dermatology. *Sov. Med.*, 1954, **18**, 9-12.

219. ————. The use of hypnosis and of the conditioned reflex therapy in dermatology. In Lebedinskii, M. S., (Ed.), 284-293.

220. Zhukov, I. Hypnotherapy of dermatoses in nursing homes and spa establishments. In Lebedinskii, M. S., (Ed.), 305-308.

221. Zikmund, V. Treatment of alcoholism with hypnosis. (In Slovak.) *Bratislava lekarsk. Listy*, 1956, **36**, 267-274.

222. ————, and Ondrejcak, M. Concerning the possibility of use of hypnosis in the therapy of Raynaud's disease. (In Slovak.) *Lekarak Obzor.*, 1958, **7**, 107-111.

223. Zvetkov, S. Painless delivery by the method of direct verbal suggestion without previous psychotherapy. *Akush. Gin.*, 1941, no. 1, 32-36.

224. Zalman, E. Laparotomy in hypnotic anesthesia. (In Czech.) *Lekarsk. Listy*, 1946, **1**, 227-234.

BRIEF CLINICAL REPORTS

A VARIETY OF HYPNOTIC TECHNIQUES

Reinaldo D. Verson, Ph.D.[1]

A number of hypnotic techniques are described to enable other workers in hypnosis to facilitate and increase the effectiveness of their hypnotic work. These techniques preferably should not be adopted literally, but modifications and elaborations of them may be found to be useful and helpful. Some precautions for the operator are suggested regarding the advantages of the avoidance of interference with the subjects' individual development of suggested ideas and procedures, but it is also suggested that when this inadvertently occurs, the hypnotist then can recover the situation by utilizing the unintentional interference to facilitate the desired results.

1. For rapid deepening of a hypnotic trance state, a technique of especial value with children: With the subject in a light to medium trance, he is asked to feel or to imagine himself to be in some other place he would enjoy, and to do this without regard for time and space. The subject usually goes immediately to a world of fantasy. The operator may then reinforce the subject's fantasy by leading suggestions, taking care to allow the subject to establish the development of the fantasy, which the operator merely reinforces.

A boy found himself in fantasy flying in an airplane en route to New York, sitting next to a man, whom he described. In New York he transferred to "a flying carpet" and was soon flying over the jungles of India. The operator added a few suggestions of animals to be seen. The carpet passed over a city; the operator asked the boy to describe the buildings. They were of an oriental type with round domes. The operator mentioned that bells were ringing in a tall steeple which would soon be under the carpet. The suggested auditory hallucination reinforced the fantasy and the trance.

2. A suggestion for deepening successive trance states: It is important to question the subject concerning his reactions and discover what he regards as important and effective. A number of techniques were used on a subject simultaneously; among them were eye fixation on a bright spot, relaxation suggestions, right arm levitation, and hyperventilation with suggestion of trance-deepening with each successive breath. After a trance developed, a succession of different techniques was then used to deepen it.

Questioning of the subject later revealed an item, which was least suspected by the operator as of value, as impressing the subject most profoundly. When the subject had first been asked to look at the bright spot, it was suggested "perhaps everything around the shining spot will become blurred." She commented, "I am a practical, materialistic woman. I know that I am looking in a certain direction and that there is no reason for part of the image to become blurred, as if it were hidden by thick fog, and yet it happened." She continued to marvel over this comparatively simple experience, which was much more effective for her than the more complicated techniques being employed.

3. A technique for use with the patient whose resistances augment the symptomatology: The value of any change in the symptoms is emphasized, even an extension, because that means

[1] Apartado 6676, Caracas, Venezuela.

that the patient is beginning to control the symptoms. An extension means a change, and change itself is beneficial. An analogy is made. "Suppose we want to remove a rusted bolt. In our effort to move it, we drive it further in. But this means that the bolt has yielded, it has started to move, and if it moves in one direction it can move in another. If it can be driven further in, it can be driven out." The simple comparison renews the subject's confidence.

4. Further illustrations by analogy to develop the subjects' understandings. To an anxious patient it is explained that when you have to make a trip, you take a plane, sit down, relax, and trust the pilot to take you there safely. You do not worry about the amount of gasoline or the altitude or the course to follow. Even though your life depends on it, you just trust the pilot who knows his job, and you try to rest and enjoy yourself as much as you can, until the pilot has brought the plane to a landing. Now, the subject is told, he is riding in the hypnotist's plane, and the piloting is all taken care of. The subject can just relax, wait, and trust the pilot he has chosen.

Another analogy to an over-anxious patient: It is explained that if he has ever been in the water he knows that the more violently he struggles to bring his body up, the more he sinks. To float, all he has to do is *to do nothing*. When he relaxes, the water brings his body up; so he can just relax and "let himself go."

5. For correction of an error or miswording in suggestions: When the therapist becomes aware that he has made a mistake, he can allow the subject to believe that it was a necessary step in his training, and then go on to utilize the learnings developed.

A man was unable to pass a tube for gastric drainage. An anesthesia was suggested on the hand and transferred to the mouth, the larynx, the esophagus, and the stomach lining. The mistake was made of dwelling on the feelings of the hand, associating them to those developed through the use of novocaine, with the feelings of enlarged tissues. The patient transferred this enlarged feeling to the gastric tract, and complained that he "felt a piece of leather in his throat." The operator complimented the patient on his capabilities of developing the feelings, and proceeded to repeat the procedure, this time removing unpleasant feelings, but "maintaining the normal size and function of all organs." It was successful, and the stomach tube was inserted.

6. An effective telephone technique for relief of tension headache: A patient was subject to painful headaches when under tension due to any stress or anxiety situation. She called in a distressed state, excited and miserable. She was told to sit comfortably, holding the phone in her right hand, to close her eyes, and to imagine that the operator was next to her. Then she was to feel his hand touching her left wrist and lifting her arm. As the arm went up she would go into a deeper sleep. When her arm was up, in a vertical position, she was to say so. She followed all the instructions and entered a deep trance. She was then told that she had her feet in a hot water bath and that she could feel the heat on her feet. She was told further, that as the feet became warmer, the blood would begin to be drained from her head, and she would feel her head cool and clear. Not only was the headache gone in a minute, but she remarked that now her feet were warm —"They were so cold before!" She had not said anything about her feet previously.

Next she was told that her left arm would start to feel heavy and begin to drop very slowly. As her arm dropped, feeling heavy, all her body would also feel heavy, relaxed, limp, loose; she

would start breathing deeply and slowly and feeling calm, peaceful, serene.

At the end of the session, which may have lasted five minutes, the patient was feeling perfectly well. She was told to come out of the trance with a cheerful laugh, and she did.

7. Deepening the hypnotic trance by the use of a metronome: Ordinarily the metronome, when used for auditory fixation in hypnotic induction, is set at 60 beats per minute, which is pleasant to most people. When dealing with a musically trained subject, he is asked to choose the most subjectively pleasant beat. Once set, it is not changed, but utilized to develop certain types of hypnotic reactions, thereby deepening the trance state.

The subject is told that the operator is using a particular "clock" on which he can change the rate of the beats, increasing or decreasing them. He is also told that the volume can be changed by lowering it till the sound disappears or increasing it until it becomes almost unbearable. The metronome is not actually touched, but the subject is asked to indicate when he detects that the rate has been increased to double the initial rate. When he is sure of this, the rate is subjectively lowered until it goes back to the original rate and then decreased until it is only half of the original rate. The subject can also be told that the volume is going to be increased, little by little. When the subject can detect "any change" he is told to raise a finger or to nod his head gently. Once the change has been indicated, the subject is told that it will continue to increase in volume until it sounds like a hammer. When it becomes so unpleasant that it is unbearable or nearly so, the subject is given a finger or head signal to so indicate, in order that the operator can stop the metronome. This technique is most effective when the operator maintains almost complete silence, speaking only briefly. It has proved effective even for resistant subjects.

This technique can be modified by making an actual change in the rate. First the subject is allowed to adapt himself to the rhythm of the metronome, resting comfortably while the beat "holds" and "deepens" the trance. Then, without his knowledge, the rate is actually slowed gradually. It is noted that the subject tends to reduce the rate of breathing and that his pulse rate becomes slower; he becomes increasingly relaxed, and the trance state becomes deeper.

This method is related to the techniques described by Cooper and Erickson in their "Time Distortion in Hypnosis."

8. A technique for use with patients suffering from arthritic pain: A particular patient suffered from arthritic pain in the right arm, especially in the hand and wrist. Anesthesia was induced in the left hand and transferred to the right arm. Then it was suggested that "the anesthetic agent" would penetrate and spread through the bones and joints, while the skin regained its normal feeling. By this process the inner pain was relieved while the skin sensations were reestablished. The anesthesia tends to last for a longer period of time than when the arm is made completely anaesthetic; a complete loss of sensation frequently "wears off" rapidly, perhaps because the arm feels unnatural and perhaps because of analogy with novocaine anesthesia, which is transient.

9. A deepening technique by analogy: The patient is told that he is at the head of a very long stairway looking at the descending steps, which are interrupted by landings. Slowly the operator and subject descend the stairs together, and they come to a landing. There they rest together. Then they descend again to another landing at a still lower level. This is repeated, the

words "deeper and deeper" and a "lower, deeper level" being emphasized. The patient understands, and the trance deepens as the descent is made. This descent of operator and subject jointly is often most important, and the pausing together at progressively lower levels also adds greatly to the effectiveness.

10. A modification of the preceding technique, adapted to age-regression: An effective age-regression technique consists of having the subject feel himself at the head of a descending stairway. The point is emphasized that *now* he is looking downwards at the head of the stairs, which represent time extending back into the past. Each stair step below represents a year of time. The subject is told that he will feel himself stepping slowly down, descending, and as he rests on each step, time has regressed a year. The subject may elect to pause on some particular step, or the operator may guide the descent and choose the stopping place, according to the reactions of the subject and the purposes of the regression.

11. A possible pitfall in hypnotic technique, which can correctly be used to deepen the trance and make the memories more available for further use: The hypnotist in suggesting hallucinations to the subject must avoid imposing his own ideas on the subject but must instead allow him to develop fully his own concepts. When the subject is allowed to do this, the trance is greatly deepened, and the hallucinations become more realistic and vivid. If the operator tries to interfere, to hurry the subject, or to impose his own ideas, the subject often becomes annoyed or confused and may partly or fully awaken. Many subjects do not find it easy to speak out and explain to the hypnotist that his instructions and urging are bothering and hindering rather than facilitating. The subject may manage to ignore the operator, but he is more likely to try to adapt his responses obligingly to the instructions, with a consequent loss of their full development.

A subject was asked to listen to hallucinated music played on phonograph records, to beat time with her hand, and to name the selections being played. The hypnotist felt that the subject was not responding adequately because of the long pauses between numbers, which no amount of urging would lessen. Later the subject spontaneously revealed that the music was not being played on a modern record player but on an old phonograph, which had to be wound with a hand crank between records and have the needle changed between every two or three playings. The operator's urging caused mild annoyance, but not enough to cause verbal protest at the time.

This is comparable to the finding of Erickson in which a subject, reliving the experience of driving a horse-drawn wagon, insisted on stopping for a prolonged period, stubbornly ignoring the operator's urging to proceed. Questioning revealed that he was waiting for a flock of geese to cross the road (2).

The necessity to be vague and general in initiating the suggestion, so that the subject can fit it into his own experiences, is illustrated by the following instance. In this case the operator was too specific in his description. Fortunately adequate time was available to enable the subject to relate the instructions to his past experiences, and the operator became aware of the subject's problem, so that he passively allowed the subject to work it out in his own way, the result being the development of a deep and satisfactory trance state.

The operator had suggested that he and the subject, a middle-aged university professor, were walking together along a narrow street, at the end of which was a church with a steeple,

and that the subject was going to be able to see the belfry and see and hear the bells. The subject associated the ideas of narrowness and darkness; he began to search his past experiences for a dark and narrow street, at the end of which there would be a church with a steeple, which, viewed from a certain angle on the street, would have visible the belfry and the bells. The subject then insisted on visiting city after city in Spain, walking the narrow streets searching for the spot where he remembered this view. Some of the churches he found were on plazas, not on a street; some were in the middle of the street instead of the end, some did not have belfries, or the bells could not be seen from the outside. Not being able to find the specific church in Spain, he then travelled to the Canary Islands and resumed his search, finally being successful. The entire trance situation thus fortunately ended on a satisfying basis in every respect.

This suggestion that the operator join with the subject in the assigned hypnotic task utilizes the phenomenon of rapport effectively as a means of deepening the trance, of reassuring the subject in his performance should it become laborious, and it allows the subject to accomplish his task without losing rapport.

REFERENCES

1. Cooper, L. F., and Erickson, M. H. *Time distortion in hypnosis.* Baltimore: Williams & Wilkins, 1959.
2. Erickson, M. H. Historical note on the hand levitation and other ideomotor techniques. This JOURNAL, 1961, **3**, 196-199.

TONGUE THRUST AND NAIL BITING SIMULTANEOUSLY TREATED DURING HYPNOSIS: A CASE REPORT

Irving I. Secter, D.D.S., M.A.[1]

(*Editor's Comment:* The overly critical reader might choose to question the right of a dentist ever to do psychotherapy. The following report demonstrates the manner in which such psychotherapy remained within the area of the dental work being done.)

A fourteen-year-old girl was referred to the author by her orthodontist. He stated that a well developed tongue-thrusting habit was interfering with the progress of the patient's orthodontic treatment. In his opinion, orthodontia could not be completed successfully unless the tongue-thrusting could be controlled. The hope was expressed that this could be accomplished by the use of hypnosis.

The patient appeared to be a bright, well-adjusted child. She reported good grades in school and good adjustments. The question of habits was raised, and a discussion was offered on the learning and unlearning of habits and on the usefulness and desirability of habits. The patient's needs and motivations, as they related to her tongue-thrusting, were questioned. She concluded that her tongue-thrusting was probably just a bad habit and something to get rid of. She expressed a willingness to do anything that would change the habit, since she looked forward to the completion of the ortho-

[1] 7407 West Irving Park Road, Chicago 34, Illinois.

dontic treatment and the improvement in her appearance.

The author had the clinical impression that the patient's tongue-thrust was not connected with any neurotic need, and this conclusion was confirmed by her willingness and ability to develop hypnosis, and by her further willingness to accept therapy for the habit.

Hypnosis was induced by a simple visual-imagery technique. Hand levitation, glove anesthesia, transfer of anesthesia, and catalepsy were elicited for the following purposes: to deepen the hypnosis, to obtain criteria for estimating depth of the trance, and to give the patient an awareness of her ability to control the functioning of her body. The patient was taught to recognize the proper and useful positions of the tongue. She learned also to be aware of an improper, or not useful, position of the tongue.

The interview at this point was focused on preparation for therapy. The therapy itself was patterned after a "theater technique."

D (Doctor): I will talk to you now and you will listen. Is that agreeable to you?

P (Patient): (nods head.)

D: Sometimes I will ask a question and you may shake your head to answer "no" or nod your head to answer "yes." You won't need to speak. Do you understand?

P: (Nods head.)

D: Would you be willing to imagine that you are seated in a theater and that you are alone in the theater?

P: (Nods head.)

D: Can you see yourself seated in the theater?

P: (Nods head.)

D: Are you in one of the first five rows?

P: (Shakes head no.)

D: Are you farther back?

P: (Nods head.)

D: Soon the curtain will rise and you will be able to see some actors on the stage. Let me know when you see them.

P: (Nods head.)

D: The scene on the stage is a revolting one. The people are saying the most disgusting things you have ever heard. It gives you a terrible feeling to think that people could behave and talk this way. It's a frightening feeling, isn't it?

P: (Nods and shudders.)

D: I'd like you to remember this feeling. Now the curtain comes down and the scene disappears, but you are still in the theater, aren't you?

P: (Nods head.)

D: Soon the curtain will rise again, but this time you see before you a beautiful scene. It makes you feel wonderful and happy to see and hear these people act and speak. I'd like you to remember this very pleasant feeling and to let me know in some way that you will.

P: (Nods and smiles.)

D: Let the theater scene disappear for the time being. Be aware of the fact that you are sitting comfortably and relaxed in this chair. Now we can talk about your tongue-thrusting and how much nicer it will be for you when your teeth are straightened. Listen carefully. Every time you thrust your tongue into an improper position, you can re-experience the bad feelings that you had during that bad scene in the theater a short time ago. You can immediately put your tongue in a proper position, and the bad feelings can be immediately replaced by the wonderful feelings. Are you willing for this to happen?

P: (Nods.)

D: Would you be willing to try this a few times right now for practice?

P: It works!

D: How do you think the orthodontist is going to feel about this?

P: He's going to be pleasantly surprised.

(Trance terminated by previously established signal.)

The patient's father was asked to join the group. He and the patient were informed that very frequently, especially with co-operative patients, one visit was sufficient. However, the need for further hypnosis would be left to the patient and to her orthodontist to determine.

The father raised the question of how the effectiveness of the hypnotherapy could be determined. He was told that, in such patients, success was usually inferred from successful results of the orthodontic treatment. In

this particular instance, though, it was possible to measure the effectiveness of the treatment more directly. It had been noted that the patient was a nail biter and that her fingernails were bitten to the quick. It was suggested that, if she really wanted pretty fingernails as well as pretty teeth, the two bad habits could be tied together and both abolished. Both the patient and the parent were amenable to the idea. Hypnosis was re-established in the patient and the following suggestions were made to her:

D: From now on, every time you start to bite your nails or thrust your tongue into an improper position, you can re-experience these bad feelings we talked about. By failing to bite the nails or by replacing the tongue in a proper position, the bad feelings can immediately disappear and be replaced by the wonderful feelings. Is this O.K. with you? (P. nods in agreement.) Are you willing to practice this again with the nail biting, right now? (P. follows through with the same result as previously.)

The patient was dismissed with encouragement and remarks intended to establish confidence in her abilities to control her habits.

Results three months after therapy: The parents reported long fingernails, and the orthodontist reported a relaxed tongue. He also expressed the opinion that the treatment was to this point successful. He did not see the need for further hypnotherapy.

DISCUSSION

Wolberg (1) states: "Success in reconditioning is possible only where the symptom or habit does not serve a vitally dynamic purpose in the life adjustment of the individual. Where a symptom has a deep symbolic value, particularly as a defense against anxiety, reconditioning suggestions will usually be unsuccessful until the patient has achieved emotional insight."

Symptoms or behavior patterns which persist on the basis of habit alone and no longer serve as defenses against anxiety frequently yield to treatment during hypnosis. The likelihood is that, if the symptom or habit is vital to the life adjustment of the individual, the patient will resist the induction of hypnosis or, if he enters the hypnotic state, he will resist treatment. No harm will come to the patient who is encouraged, but not badgered, into yielding his symptoms, and with whom a permissive approach is used. The willingness of the patient to accept hypnosis and therapy on this basis would indicate that the symptoms *did not require psychiatric intervention.* The unwillingness of the patient to accept hypnosis and therapy could have been regarded as *indicative of the need for psychiatric treatment.*

It is important to remember that people, rather than symptoms, are treated, and that hypnosis itself is not the therapy. It is very important to separate hypnotic induction from competent treatment *during* hypnosis.

REFERENCE

1. Wolberg, L. R. *Medical hypnosis.* New York: Grune & Stratton, 1948. Vol. 2, p. 215.

BOOK REVIEWS

Fredericka F. Freytag. *The Hypnoanalysis of an Anxiety Hysteria.* With Foreword by Milton H. Erickson. New York: Julian Press, 1959. xi + 412 pp. $6.50.

By Calvert Stein, M.D.

The volume is the presentation, compiled from verbatim records, of a comparatively short-term therapeutic analysis (78 sessions) by a master-clinician, who is well trained in both psychoanalysis and hypnosis and who writes with refreshing simplicity. The patient is a bachelor physician of thirty-two with multiple overwhelming anxieties and all the earmarks of a serious character disorder, mixed type. He began life as the unhappy object of multiple ambivalent hostilities, rejections, assaults, seductions, betrayals, indignities, and inconstant overprotections.

Mother and aunts repeatedly forced enemata on him; grandmother warned him of "the evil eye"; father joined the others in pacifying him with "an old-world custom" of stroking the genitals and tongue-kissing; a sadistic man repeatedly grabbed at the boy's genitals and threatened an amputation. For the consequent terrifying nightmares, gastric upsets, and school difficulties father took the boy to a priest, then to gypsies who told him that he was "bedevilled and bewitched," then to a charlatan who rubbed him all over with garlic, then he was returned for more holy water and the inevitable enemata. All this was in New York City at a time when competent child guidance clinics were springing up all over. Later there developed varieties of psychosexual impotence, ejaculatio praecox, obsessions and compulsions, extreme fear of being alone in open spaces, withdrawal, depression and guilt, "feelings of depersonalization," and "dread of loss of equilibrium and control." He took ultimate recourse in sedative drugs, wine, and finally narcotics with resultant imprisonment. "Fear had become so unbearable that life was impossible without recourse to destructive methods of alleviation."

Three traumatic deaths punctuated his early years (grandfather, father, and a girl neighbor). He completed his medical education, military service, internship and residency and undertook a year and a half of conventional psychoanalysis (350 hours) without much benefit before starting hypnoanalytical therapy. While in prison he had broken his addiction to drugs.

In the Foreword Dr. Erickson aptly states: "The volume constitutes a fascinating documentation of Doctor Freytag's effective use of hypnosis in the psychotherapy of a patient who was seriously ill emotionally, of his continuous progress from one therapeutic session to the next. It is an exposition of what psychotherapy means to the patient as he experiences the present, speculates upon the future, and re-examines the past in terms of current developmental processes. . . . It is a portrayal of what a therapist is and how a therapist functions in the task of guiding a patient's integration of the self. It shows how hypnosis can be used with remarkable effectiveness in psychotherapy . . . "

In her short preface the author states: "It is the contention of the psychoanalytic school that the repressed pathologic material must be made conscious in order to achieve insight and a resolution of the conflictual material . . . But psychiatrists who use hypnotic phenomena as a therapeutic technique are aware that the patient may reveal marked favorable and often complete changes in his feeling *before* he brings the conflictual matter to consciousness or obtains even an intellectual insight . . . While . . . exploring the conflicts present in the unconscious, his ego can at the same time observe the procedure, thus producing a close association between emotional and intellectual insight."

Unfortunately no amount of exposition can be convincing to therapists who have neither used nor experienced hypnotic phenomena, and for those with such experience no detailed explanation is necessary, yet this book can meet the needs of both groups.

Part I gives the case history, largely autobiographical, and Dr. Freytag's first impression: "He presented a picture of intense anxiety mingled with hopelessness and utter despair." (p. 9). She also describes her first interview, her summation of it, and the post-hypnotic suggestions given.

Part II, "Active Therapy Penetrating the Outer Layer," covers the skillful use of hypnotherapeutic procedures and deconditionings during the first therapeutic sessions and ends with Dr. Freytag's emphasis on the patient's multiple achievements, and a temporary severance of transference during her vacation.

In Part III, "Active Therapy in the Deeper Psychodynamics," the remaining 49 sessions, Dr. Freytag cautiously fed back dream material that was previously too traumatic to handle and wisely refrained from too active analytical interpretation. She wrote, "Resistance to the feeling recognition that one's own hostilities, strivings, and attitudes may be projected onto others is one of the most difficult resistances to overcome. In the hypnotic trance experiences the patient was able to handle this projection mechanism with comparative ease and rapidity." (p. 407).

Dr. Freytag's choices for selective discussion and direction at each conference are in line with newer analytic philosophy and combine both the sector technique of Felix Deutsch with the essence of Moreno's psycho-drama, except that the patient himself furnishes and "role-plays" or manipulates the entire cast of characters and auxiliary egos in the fantasies and dreams that emerge spontaneously or by suggestion from the wealth of his own unconscious reservoir of experiences.

Under the rule that one picture is worth thousands of words and innumerable hours of conventional analysis, Dr. Freytag in the first therapeutic session took her patient to the screen-projected fantasy of the flood-rescue operations on the street near the patient's childhood home, where in a matter of 40 minutes he could revivify and re-evaluate the elusive symbols and subterfuges that represented and combined a large number of the etiological traumata of his neurosis. At the same time she used his own experiential learning to recondition in fantasy *some* aspects of his anxiety into a trial run of anticipated success. Like the "make-believe" of childhood, this is a variation of an age-old dramatic technique with universal appeal and high potential for therapeutic effect. It is used repeatedly throughout the book, as are age-progression, time distortion, and hallucination of composite figures for subsequent identification and separation.

Dr. Freytag appears to be over-dependent on the use of the trance state for almost every therapeutic session. She repeatedly emphasized to the patient his "*pathological* emotional state." The terms castration, anxiety, unresolved Oedipus, sadism, incestuous, and masturbation are also overstressed and as such can be threatening even for a professional patient. Most patients are much more comfortable with references to such generalizations as "emotional disturbances or variations," "fear of injury" to parts of the body, ambivalence toward members of one's own family, degrees of resentment and hostility or aggression, and "self-love" through stimulation of various parts of the body, both for reassurance and for release of tension. At times Dr. Freytag managed this semantic device for reducing anxiety effectively when she explained that the erotic preoccupation that arose from sleeping with his mother was a normal response to an abnormal situation, as was also the hostility occasioned by the unconscious conflicts (p. 181).

Dr. Freytag employed Erickson's geometric progression to accentuate the patient's gains in teaching him to separate the "forbidden" from the "permitted" women (p. 249), but in achieving "almost perfect" orgastic climax, the patient seemed to cling to the safety of relative impotence until late in the analysis. Much is made of a keyhole incident in terms of separation from mother, but voyeurism as a normal component of childhood eroticism is not pursued (p. 213).

In view of this patient's already precarious self-confidence as a male (p. 246), her thrice employed use of an hallucinated auto-castration (pp. 124, 220, 271) seems of dubious therapeutic value in the opinion of this reviewer. Completion of the castration dream (p. 352) and repair of the damage-in-fantasy could have shifted the emphasis away from self-mutilating impulses.

However, as the reader unconsciously or otherwise prompts both patient and therapists, it must be remembered that the printed word at best cannot approximate all of the clues and challenges that occur in the live consultation situation and that only the therapist has the right as well as the responsibility to detour, reject, or accept and pursue whatever appears likely to be most productive and beneficial.

Some of the therapist's ingenuity is indicated by her methods of teaching him to hallucinate a composite female and then to separate the three generations of women in his life; preparing him for temporary severance of transference during her vacation via an hallucinated auto trip with her, during which he soon lost sight of her car and happily drove on alone, and finally at the termination of the analysis by inviting *him* to leave *her*, thus transposing his life-long pattern of fear of mother leaving him.

Dr. Freytag does not claim that this is a completed analysis. She is willing to wait for the patient to apply what he has learned, and he expresses this understanding quite well: "There remains, of course, the necessity of *working through* the in-

sight and re-education learned in therapy" (p. 411).

The patient in his summary compared his analysis to the peeling of an onion, which may suggest that he is aware of the additional work to be done before he can feel sweet as well as strong.

The book is an absorbing and fascinating advanced clinical exercise for the conscientious psychotherapist. The patient is a living textbook of psychopathology and rewarding psychotherapy for advanced workers in the allied disciplines of psychiatry, medicine, sociology, psychology, and the law. It is not only an excellent case study; it is also an exciting documentary psychiatric novel.

Milton H. Erickson, M.D., Seymour Hershman, M.D., and Irving I. Secter, D.D.S. *The Practical Application of Medical and Dental Hypnosis.* New York: Julian Press, 1961. Pp. 470. $12.50.

By David B. Cheek, M.D.

In many ways the seasoned instructors and competent clinicians collaborating on this book have more than fulfilled their promise of a "volume specifically designed for professionals in all areas of medicine and dentistry to help achieve maximum operational results and the further implementation of competence." It would have been wise if the publishers had not extended the promise in bold letters on the paper jacket that this is "a unified Guide and Textbook presenting: ALL PHASES OF MODERN HYPNOTIC INDUCTION TECHNIQUES—THE THERAPEUTIC UTILIZATION OF HYPNOSIS," because the authors do not fulfill this promise as the words might be interpreted by the average student of hypnosis. They have omitted almost all mention of possible alteration of disturbed physiological behavior with hypnotic techniques, an area to which Erickson has made conspicuous contributions. The section on anesthesiology gives no specific help to the anesthesiologist. There is a curious lack of reference to adequate literature on this subject by Harold Crasilneck, Milton Marmer, Bernard Raginsky, and Harold Rosen. Although Erickson presents three gynecological cases comprising the topics of dysmenorrhea and menorrhagia, these are not indexed, and there is no section on gynecology, which had been promised on the jacket. There is no consideration of the various gynecological manifestations of frigidity. The 20 pages on "Hypnosis in Obstetrics" understate the well-known fact that there is a psychological control of genital bleeding. There is no consideration at all of the value of hypnosis for uncovering fears of obstetrical patients. It was a surprise to find no references in the text or the bibliography to such authorities on gynecology and obstetrics as William Kroger, Sol de Lee, and Richard M. Clark.

If it were not for the paper jacket there would be little criticism of this very readable and beautifully printed book because the preface, which will outlast the cover, clearly states that the authors have adapted the material from their teachings "in seminars throughout the country during the past several years and from their day-to-day experience rather than on any purely academic approach to topics or second-hand access to clinical material and problems." They state that "no seminar or single text can provide basic training for the internist, obstetrician, gynecologist, anesthesiologist, dentist, oral surgeon, psychologist or psychiatrist." The intent is to offer the student of hypnosis a broad base of understanding of unconscious behavior, use of ideas, and manifestations of hypnotic behavior which can be incorporated into the specific mannerisms and ways of thinking of the individual in his own area of professional work. In this day of general suspicion and fear that incompetent physicians and dentists will do harm with hypnosis it seems a pity that the publishers of this book could not temper their enthusiasm on the jacket with more respect for what the authors were really presenting with dignity and conservatism.

The first 201 pages are concerned with mechanisms, principles, and phenomena of hypnosis. It would be hard to find an intellectually curious hypnotherapist in America who has not been profoundly influenced by the observations and teachings of Milton H. Erickson. It is a pleasure to see the essence of his great contributions so clearly presented in the text, in the verbatim interviews, and in the discussions of interviews. If the reader will study and restudy these with an eye for general principles of psychodynamics rather than for specific, spoon-fed help on clinical problems he will find this a most valuable book. He will find himself developing an increasing respect for the dignity of his patients. His humility will grow as he learns that doctors are good or inadequate in ratio with their subconscious sincerity and capacity for giving hope to their patients.

Suggestions for possible improvement of future editions of this book would include an enlargement of the index. On the basis

of commonly accepted form for medical books we would expect 1344 items but have only 249. A number of items relate to people who had nothing to do with hypnotism, while important topics in the text are omitted. It might be suggested, for example, that such items as arthritis; ankle, sprain; cancer, terminal; cold; Crasilneck; depression and insomnia; dream induction; and dysmenorrhea would be helpful additions for rapid reference to the text. The bibliography containing 133 references "of interest" seems biased and incomplete for an "official textbook of the Seminars on Hypnosis Foundation" as is stated on the inside jacket flap. One of Erickson's classical contributions, "Deep hypnosis and its induction" has been misprinted as "Chapter in (106)." This should read "Chapter III in L. M. LeCron (Ed.), 'Experimental Hypnosis.'" Among omissions of valuable books from the bibliography are those of Forel on "Hypnotism," Flanders Dunbar's "Emotions and Bodily Changes," Jerome Schneck's "Hypnosis in Modern Medicine," and Milton Marmer's "Hypnosis in Anesthesiology." Since Erickson pioneered the development of ideomotor questioning techniques for reaching subconscious material not accessible to ordinary verbal communication, it would seem fitting that he present this material himself. This subject is not indexed, and it is found only in a case-presentation by Secter near the end of the book. There is no discussion of its values or limitations.

In conclusion it should be said that the criticisms apply mainly to unrestrained claims on the paper cover. The real value of this book lies in its presentation of material representing more than 30 years of creative experience by Erickson coupled with the clear didactic expression of his teachings, individually modified by his two very competent co-authors. This book will serve as a helpful stimulus to thought for students of all thoughtful instructors in medical and dental hypnosis. It will not serve as a textbook until the deficiencies in specific topic coverage, bibliography, and indexing have been corrected.

Manuel Hubí Campos, M.D. *Hipnosis Moderna—Manual de Hipnologia Médica y Odontológica.* [*Modern Hypnosis—Manual of Medical and Dental Hypnology.*] Buenos Aires: Libreria Vásquez Editorial, 1960. Pp. 190.

By Isaac Gubel, M.D.

This first work by Dr. Hubí Campos, which consists of 10 chapters and an appendix, is a simply and well-written introduction to the study of hypnology.

It has a good bibliography, classic as well as modern, and as Prof. César Castillo, who wrote the prologue, says, it is a text "free of the usual doctrinary hodge-podge."

The first chapter is a historical introduction. The second is a review of theory, particularly of the reflexology concept of hypnosis, a concept which is predominant throughout the book. The third chapter discusses the physiological and psychological phenomena of the hypnotic state, describing in a systematized form separate experimental discoveries, without offering critical discussion of these. The brief fourth chapter is concerned with the study of suggestion, especially regarding neurophysiological aspects. The following chapter discusses the hypnotic state, hypnotizability, and sets forth several hypnotic scales in use, treating in detail that of Katkof-Platonov. The sixth and seventh chapters are devoted to general concepts and hypnotic techniques, with a review of the classical methods, and an exposition of a method on a Pavlovian basis. The eighth chapter treats of the therapeutic use of hypnosis, doing this in a way almost too schematic, while the tenth chapter presents the medico-legal, theological, religious, and ethical aspects, and the position of medical authorities concerning hypnosis.

The appendix, entitled "Nervous Typology," sets forth Pavlov's classification in a clear and summarized form, correlating it with the typology described by Kretschmer.

This book is recommended for the general medical man and the dentist who are just becoming acquainted with hypnology and hence need a fund of information presented simply and well.

Belo, Jane. *Trance in Bali.* Preface by Margaret Mead. New York: Columbia University Press, 1960. xiii + 271 pages. 108 photographic illustrations. Combined index and glossary of Balinese terms. $7.50.

By André M. Weitzenhoffer, Ph.D.

No matter how excellent they may be, some works by their very nature appeal only to a selected audience. *Trance in Bali* will probably be such a work. There is no question that this long delayed book, scheduled to be published 18 years ago, is an outstanding and scholarly work of which its author can be justly proud. Although this reviewer is by no means an authority in anthropology, a certain familiarity with and interest in this field will, it is hoped, excuse what might otherwise appear as

presumption on his part in evaluating an anthropological work. In any case the work deals with a topic most germane to this JOURNAL, and a review of it seems imperative. Were this review to be published in an anthropological journal, there is little question in this writer's mind that *Trance in Bali* would be unqualifiably recommended to the readership. Looking at it, however, from the standpoint of the psychologist, the psychiatrist, and the practitioner of medicine, this reviewer feels a certain ambivalence in evaluating the work. There is no question that it represents a careful, detailed, and sensitive account of trance behavior in Bali, of the individuals who manifest such behavior, and of the setting in which it occurs. As an anthropological work it is well written and reads easily provided one is accustomed to reading anthropological field reports and, especially, is oriented toward the cross-cultural approach to the study of human behavior. In the absence of such experience and orientation, it is to be feared that some readers will find the book at times tiring and perhaps somewhat repetitious, although it should be emphasized that every bit of the included material is relevant. It is also rather doubtful that anyone can arrive at a clear understanding of the material given in the book without some exposure to an earlier work of Bateson and Mead, *The Balinese Character,* and the concurrent or prior reading of this work is very much recommended to any prospective reader of *Trance in Bali.* Short of doing this, the reader runs the danger of misinterpreting the data presented by Belo. This is not intended as a criticism of the book, for it apparently was originally planned to be a companion volume for the Bateson-Mead work, and it is difficult to see how the author could have done very differently short of unjustifiably incorporating into her own contribution a good portion of the material in the earlier work.

For those readers of this review who are not acquainted with the peculiarities of the Balinese culture, a word of explanation is necessary in order to place the work in its proper perspective. Briefly let it be said that Bali, perhaps popularly best known for its dancers (especially its kris dances and for its masks), is much better known among anthropologists and psychologists for the fact that trance behavior is a widespread and integral part of the *ethos* of the Balinese people. For the Balinese, going into a trance is as common an everyday experience as eating, sleeping, and other everyday functions. Although trance behavior is usually manifested in connection with religious activities, soothsaying, and healing, it is also in a most interesting way connected with social and communal recreational activities by the fact that these and religious matters are closely linked. The Balinese trance is, for the most part, a self-induced, often spontaneously occurring, condition in which the "trancer" preserves a high degree of autonomy; yet it can also be brought about on demand, often in an automatic-like response to certain cues or signals, and much of the trance behavior is clearly in response to hetero-suggestions. In these respects, then, trance behavior in Bali is basically and outstandingly different from hypnotic behavior as it is known in our culture in its manifestations, in the manner it is perceived, and the way it is utilized.

In general, *Trance in Bali* is a book which consists of a sampling of trance behavior as it was observed to occur in various parts of Bali and under a variety of conditions. Various occasions during which such trance behavior was observed are described in often meticulous detail. A number of outstanding participants in trance manifestations are also individually described. Such descriptions and associated analyses are excellent from the standpoint of anthropological reporting, but they are unfortunately rather inadequate from the standpoint of the psychologist or psychiatrist. Rather essential details are plainly missing. Whether they could have been obtained is of course a good question to ask. A field study is a field study and not a laboratory investigation. Yet psychologists and psychiatrists who read the work will not help but wish that a better clinical evaluation and picture of the protagonists and their behavior had been obtained. On the other hand, so much of the clinical picture that we form of an individual is culture-bound that perhaps any attempts in this direction would have been fruitless. Still it would have been most interesting and perhaps valuable if nothing more than some measure of these individuals' suggestibility or hypnotizability as we understand it in our culture had been obtained and reported. This is a point of no little importance, for while the author has very carefully used the word "trance" in reference to the behavior she describes, there are several references to hypnosis in a way which seems to indicate that she at times sees some strong similarities if not an equivalence between the two.

In the final analysis, *Trance in Bali* remains an outstanding work which every

serious student of trance behavior, and in particular of hypnotic behavior, ought to read. The potential reader is, however, forewarned that it was clearly not written for popular consumption but rather it is a work for professionals, primarily anthropologists, and scholars in related fields.

Margaret M. Clark, Ph.D. *Teaching Left-Handed Children.* New York: Philosophical Library, 1961. Pp. 44. $2.75.

By Milton H. Erickson, M.D.

The maintenance of a highly passive role by the investigator exploring spontaneous hypnotic behavior leads to many interesting findings. Among those most intriguing and often most informative have been the spontaneous development of marked alterations in the handwriting of subjects to whom no suggestions leading to such effects had been given, either directly or indirectly. This reviewer first observed this type of behavior in 1924 when an experimental subject was asked to write an account of a non-traumatic past experience. She began in the usual fashion, but upon reaching the end of the line, merely moved her hand down one space and wrote from right to left in mirror-writing, reverting again to normal script upon reaching the left side of the paper and continuing in this fashion. Similar behavior and variations of it have since been encountered by this reviewer and independently by his colleagues. As is frequently the case, this particular subject could offer no explanation of the mirror-writing, disclaimed any previous experience and could only make confused efforts at duplicating her trance mirror-writing. In the trance she continued her alternating normal and mirror-writing, but could also readily write normally from left to right or consistently with mirror-writing from right to left. She could also do mirror-writing from left to right but not normal writing from right to left. In addition, instances have been noted in many other subjects of a spontaneous occurrence of left-handedness in writing during the trance state which was disclaimed in the waking state and which could not be duplicated consciously.

Because of numerous instances since 1924 of such observed spontaneous alterations in behavior, this reviewer recommends with special emphasis this small booklet. This work is not concerned with hypnotic research, but it contains a wealth of information for the psychotherapist on laterality as manifested in left-handedness, the development of laterality, ambidexterity, mirror-writing, stuttering and left-handedness, laterality in relation to reading and writing problems, and the problems involved in the teaching of children having one or more of these problems. An awareness of the content of the book will be of significant value for the investigator doing research in hypnosis and for the therapist employing hypnosis in dealing with the problems of physical rehabilitation of both juvenile and adult patients.

Hirokazu Kurauchi, M.D., and Shigeharu Maeda, M.D. *Hypnosis Today.* [In Japanese.] Tokyo: Keiotsushin Book Co., 1960. Pp. 257.

By Yujiro Ikemi, M.D.,
Executive Secretary of the
Japanese Psychosomatic Society

This book covers a general introduction of hypnotic phenomena, history, techniques of induction, specialized techniques such as drug hypnosis and depth hypnosis, the depth of hypnotic states, hypnotic phenomena at various trance levels, hypnotherapeutic and hypnoanalytic procedures, theoretical considerations, misconceptions and misuse of hypnosis, and hypnosis in medicine and psychology (particularly, the psychodynamic field).

This is the first comprehensive and scientific publication on hypnosis written from the medical standpoint in Japan. It is written in a simple but polished style and introduces many cases treated by the authors themselves. At the same time important works on hypnosis are abundantly and systematically quoted from domestic and foreign literature. These references are mostly collected at the end of each chapter so that the book is easy to read and interesting for both medical and non-professional readers.

There is still a good deal of uninformed prejudice against the use of hypnosis in Japan, but this is now decreasing. The authors have played a leading part in introducing hypnotherapy and hypnoanalysis conducted in a scientific manner to medical circles. This book will make a significant contribution in presenting a calm and reasoned picture of hypnosis to those who might otherwise be biased against so useful an adjuvant to psychological and medical work.

Thus this book is highly recommended as a text book of medical hypnosis not only for medical students and physicians, but also for psychologists and serious students of the field.

Benjamin L. Gordon, M.D. *Medieval and Renaissance Medicine.* New York: Philosophical Library, 1959. Pp. 843. $10.

By Ethan Allan Brown, M.R.C.S., L.R.C.P.

This volume, delightful to all those interested in medical history, fills the gap that lies between Claudius Galen and Thomas Sydenham.

Like the little girl's book about penguins that told her more than she wished to know about the subject, Dr. Gordon's book will also tell physicians more about medieval and renaissance medicine than many will wish to know, but with a difference. No physician can read Dr. Gordon's work, even in part, without enlightenment as to the false starts, the dead-end paths, the missed opportunities, and the slow realization of the importance of some of the advances in this profession.

Until the end of the twelfth century, the practice of medicine was dogmatic and not based upon knowledge. To quote Gordon, "Medicine became the happy hunting ground of the quack, the drug peddler, the sorcerer, and the exorcist." Early Christians thought illness to be a mark of divine displeasure, and hence concerned themselves little, if at all, with medicine's natural art. The one concern of human existence was preparation for a future life. And yet, during these centuries of scholasticism, Aetius of Amida (510-574) employed digital pressure in detecting anasarca and palpation in diagnosing enlargement of the spleen and recommended inspection of the urinary sediment to prove the existence of diseases of the kidneys. His works discuss the value of percussion in the diagnosis of ascites and of pleurisy. And Alexander of Tralles (526-608) urged that in acute conditions consideration be given the patient's strength, his constitution, and mode of life, as well as the season of the year and the atmospheric variations. Of Johannis Actuarius, Dr. Gordon states that he wrote accurately of the subjects of colic and lead poisoning, and was the first to detect and describe the pinworm. He was set apart from his times by the fact that he distinguished the mental functions of man as perception, imagination, judgment, understanding, and reason.

By the thirteenth century physicians were set apart from other professions by particular licenses. Frederick the Second published his medical ordinance and in 1242 stated that the physician could only practice in accord with a code. "The practice in all branches of medicine (in surgery also) and to bear the title of physician, is permited only to him who has passed an examination of Salerno and received the state-license from the Emperor or his Viceroy. Violators of the law are to be punished by fines of money and goods and to receive one year's imprisonment. Before a physician is admitted for an examination, he must have attended lectures in logic for three years, and on medicine and surgery for five years, and must have practiced under the direction of an experienced physician for one year."

But, three centuries earlier, the precepts of Isaac Israeli, who died in 932, could be made part of a contemporary paper on psychosomatic medicine, and these precepts would not now be generally recognized as being more than ten centuries old. Isaac says, "Comfort and soothe the patient, even if thou art in doubt, for by that means dost thou support nature. If the patient does not follow thy directions, or if his servants and household do not carry out thy orders with dispatch or treat thee with disrespect, give up the case. Visit not the patient too often or remain too long with him, unless the treatment demand it, for it is only the fresh encounter which giveth pleasure."

El Milik al Mansur Gilavun would be at home in the twentieth century. He founded a hospital at Cairo in 1283, which admitted all diseased persons, regardless of race, creed, color, or social status. Special wards were reserved for wound cases, for those afflicted with diseases of the eye, for cases of dysentery, and for patients with fevers. There was a gynecological ward and another for convalescents, all directed by a physician-in-chief and by male and female nurses.

Dr. Gordon recalls the fact that the so-called psychosomatic approach of the modern physician is in reality only a rediscovery of what had been known to all great teachers of medicine from Hippocrates to Charcot. Maimonides, for example, recognized the relationship that exists between the psyche and the soma, and true interdependence of mind and body. He noted that those who were healthy were cheerful and contented, and that those who were ill were depressed and displeased.

The scientist-physician of today had his counterpart seven centuries ago, although it is difficult to believe that Roger Bacon, who invented spectacles, was imprisoned from 1278 to 1292 for saying, "There is one science more perfect than others, which is needed to verify the others, the science of experiment, surpassing the sciences dependent on argument, since these sciences do not bring certainty, however strong the

reasoning, unless experiment be added to test their conclusion. Experimental science alone is able to ascertain what can be effected by nature, what by art, what by fraud. It alone teaches how to judge all the follies of the magicians, just as logic can be used to test argument."

We see the gradual development of modern scientific medicine as it evolves from general superstition. Borelli (1608-1679), a pupil of Galileo and a teacher of Malpighi, estimates the power of the muscle by its weight and gives mathematical expression to the workings of the human body. Baglivi (1669-1707) says, "He who diagnoses well, cures well," and also that, "Reasonable thought and observation are the chief roots of medicine; observation, however, is the thread by which the conclusions of the physician must be guided." But progress was not uniform. The Faculty of Paris prohibited the use of chemical remedies and did not permit their mention in examinations, and the French Parliament passed a law forbidding the use of antimony.

The history of the renaissance of medicine comes to an end with the translation into English of the *Regimen Sanitatis Salernitatis* by Sir John Harrington (1561-1612), who introduced to his readers the invention of the modern "water closet," and who in his writings had little to say of souls and "humours," but more of medicine that is to remain an art and also to become a science.

ABSTRACTS OF CURRENT LITERATURE

Edited by André M. Weitzenhoffer, Ph.D.

Abstracts prepared by the authors are indicated below by the letter A following the abstracts.

111. Kurauchi, H., and Maeda, S. Study of hypnotic phenomena. *Fukuoka Acta Medica,* October 1956, **47**, 10, 1611-1626.

Many classifications and systematizations have been done on hypnotic phenomena. Deep hypnotic phenomena can be easily induced in good subjects, but in others they can only be induced with care, repetition, and effort. Since hypnotic phenomena are induced by verbal suggestion, the semantics of the operator's suggestions may be most important. Several phenomena which can be induced only by special suggestions are described, and each hypnotic phenomenon does not necessarily always appear in the order indicated by Wolberg's scale. The present problem in research on hypnotic phenomena concerns the detailed description and interpretation of the phenomena, including various psychometric and psychophysiologic tests, with consideration of the divergent findings of other research workers, to effect a differentiation of the genuine and the spurious. This should serve to correct the diversity in theories of hypnosis. (A.)

112. Kurauchi, H. Saiminsei nenreitaiko shiron. [A trial discussion on hypnotic regression through the use of hypnosis.] *Seishin Bunseki Kenkyu (Japanese Journal of Psychoanalysis),* 1958, **5** (4), 1-7.

A discussion is offered of hypnotic regression, both spontaneous and suggested, and of hypnotic revivification and the accompanying psychological and physiological phenomena. (A.)

113. Kurauchi, H. Saiminkanjusel no kenkyu. [Experimental studies on hypnotic susceptibility.] *Kyushu Neuropsychiatry,* 1957, **6** (2), 20-29.

An experimental study was made of the hypnotic susceptibility of 46 male and 40 female children aged 12-13 years. There were found: (1) a greater susceptibility than among adults, (2) no sex differences, and (3) slight, perhaps insignificant, positive or negative correlations between hypnotic susceptibility and intelligence, adjustment, and hysteria. (A.)

114. Hasuzawa, T., and Kurauchi, H. Saimin no taiken. [A psychopathological study of hypnotic experience.] *Kyushu Neuropsychiatry,* 1959, **5** (2), 56-62.

Twelve sessions were held to study medical hypnosis. Various phases of the subject were discussed in these sessions. The senior author was hypnotized by his colleague to secure a systematic subjective experiential account of hypnotic phenomena. (A.)

115. Kurauchi, H., and Shirafuji, Y. Fugue no saiminryoho. [Hypnotherapy for fugue.] *Saimin Kenkyu,* 1959, **5**, 28-41.

Three cases are reported of fugue states characterized by amnesia. All three were preceded by emotional conflict, all were susceptible to hypnosis, and hypnotherapy corrected the amnesias. (A.)

116. Karauchi, H., and Maeda, S. Saimin giho no kenkyu. [Study on methods of hypnosis.] *Fukuoka Acta Medica,* 1956, **5** (1), 130-138.

Hypnotic phenomena and trance levels and depths have not been sufficiently defined to permit adequate understanding of them. There is need to study the methods of trance induction and to clarify individual phenomena, particularly in Japan, since the problems of translation of foreign studies encounter semantic barriers. (A.)

117. Kurauchi, H., and Maeda, S. History of hypnosis. *Fukuoka Acta Medica,* October 1956, **47** (10), 1606-1610.

A survey of the recent literature discloses that hypnotherapy is preponderantly psychologically oriented rather than of the direct suggestion type. (A.)

118. Kurauchi, H. Seishinbunseki to saimin I, II, and III. [Psychoanalysis and hypnosis I, II, and III]. *Seinshinbunseki Kenkyu [The Japanese Journal of Psychoanalysis*], 1957, **4**, 1-2, 1-23.

Freud's difficulties with hypnosis led to his developing free association instead, with the result that hypnosis as a therapeutic technique was overlooked by psychoanalysis. Other outstanding psychotherapists have demonstrated adequately the possibilities of adequate and brief psychotherapy based on hypnosis. (A.)

119. Kurauchi, H. Psychoanalysis and hypnosis: I, II, and III. *Nippon Seishin Bunseki Gakukai,* January-February 1957, **4**, 1-2, pp. 1-23.

Because of certain difficulties in his uses of hypnotic techniques, Freud abandoned hypnosis as a tool of psychoanalytic practice. This abandonment had the effect of putting this technique in an area beyond the interest of psychoanalysis. But, within the past decade, many therapists (Erickson, Lindner, and Wolberg) gave hypnosis an opportunity to exist among other techniques. The first chapter clarifies the relationship between psychoanalysis and hypnosis. Techniques of hypnoanalysis are described. The next chapter summarizes foreign literature concerning the experimental approach to dream psychology (Schrötter, Roffenstein, Nachmanson, and Farber and Fisher), and psychopathology of everyday life (Erickson) through the use of hypnosis, and summarizes the author's experimental studies. The last chapter is devoted to the review of psychoanalytic theory of hypnosis (Freud, Ferenczi, Jones, Bjerre, Schilder and Kauders, Speyer and Stokvis, Lorand, Kubie and Margolin, and Bellak.) (A.)

120. Kurauchi, H. Shinkeisyo no jikkensaimingakuteki kenkyu. [Experimental studies on neuroses by the use of hypnosis: Report No. 1: On Freud's theory of lapsus linguae. Report No. 2: On the problem of dream symbolism.] *Kyushu Neuropsychiatry,* 1954, **4** (1-2), 35-43 and 44-49.

Experimental studies employing hypnosis were made of the Freudian concept of lapsus linguae and of the problem of dream symbolism. Results obtained indicate that Freud's ideas were correct as to the bases of these concepts, but that their interpretations are too varied and complicated to be categorically equated with specific predetermined meanings. (A.)

121. Singer, R. M. Should dentists shun hypnosis? *Canada dent. Assn. J.*, 1960, **26** (Dec.), 705-710.

A systematic appraisal is offered of the dental use of hypnosis, the arguments for and against, and the conclusion is offered that hypnosis as a technique and hypnotherapy as a procedure are safe and valuable adjuncts to the effective practice of dentistry. (M.H.E.)

122. Shibata, Joseph I. Automatic frequency analysis of electroencephalographic changes associated with hypnotic state. *Fukuoka Acta Medica,* 1960, **12**, 12.

Electroencephalographic changes associated with the hypnotic state were studied by means of automatic frequency analysis and the prehypnotic state, the hypnotic waking state, and the hypnotic state. They were examined comparatively in ten neurotic patients, and the results obtained are summarized as follows: 1. The decrease of alpha wave is observed in the hypnotic state, and the energy percentage of fast waves tends to decrease, and increases of delta and theta waves are found. The hypnotic state tends to restore quickly to the prehypnotic waking state by hypnotic waking suggestion. 2. The tendency seen in the above item is observed best by leads from the parietal and occipital regions. 3. A clear electroencephalographic difference is observed between prehypnotic waking state, or hypnotic waking state and hypnotic state. In view of the frequency analysis, the hypnotic state appears similar to a drowsiness or light sleep. (A.)

123. Shibata, J. I. Hypnosis and transference. *Jap. J. Psychoan.*, 1958, **5** (4), 8-14.

Hypnosis was applied to a study of the relationship between transference to the operator and hypnotic susceptibility, and the depth of hypnosis and the cures effected on 15 neurotic patients. Negative transference did not necessarily negate a good trance. Positive transference augured well for recovery; negative transference was not usually conducive to recovery. Posthypnotic suggestion effected positively a negative transference in one instance, with a resulting cure. (A.)

124. Flores, Marcos. La regresión hipnótica en el nivel psicológico. [Hypnotic repression at the psychological level.] *Rev. Latino-Amer. Hipn. clín.*, 1960, 1 (3), 41-45.

Since Freud and Breuer presented their study of hysteria in 1892, the fact of hypnotic regression has been known. With the help of Rorschach psychograms on 7 subjects, the author concludes that in all probability a regression under hypnosis is a reality and not a simulation. He criticizes Young's paper of 1940, where opposite conclusions had been reached. The need for controlled studies is emphasized. (P.S.)

125. Badras, Alvaro. Hipnodontia. [Hypnodontia.] *Rev. Latino-Amer. Hipn. clín.*, 1960, **1** (3), 15-19.

The author reviews the increasing acceptance of dental hypnosis in the different cities of Brazil and summarizes his own experience with different applications of hypnoss in dentistry. Four clinical cases are given in detail. (P.S.)

126. Isaza Mejia, G. Hipnosis en ginecología. [Hypnosis in gynecology.] *Rev. Latino-Amer. Hipn. clín.*, 1960, 1 (3), 37-40.

The ovaries and uterus, as well as the body in general, can respond to psychological stimuli with functional and even anatomical alterations. All forms of psychotherapy, even the simplest like history taking, can contribute to a return of normal ovarian balance. On this basis hypnosis, not as an isolated technique but as part of a general psychotherapeutic approach, has a definite use in gynecological dysfunctions. Two cases, one involving hysterical paralysis and the other sterility, illustrate the usefulness of hypnotic techniques in discovering the etiology and effecting a cure. (P.S.)

127. Perez, S. J. Hipnotismo en relación con la moral cristiana. [Hypnosis in relation to Christian morals.] *Rev. Latino-Amer. Hipn. clín.*, 1960, **1** (3), 27-34.

The author, dean of the faculty of dentistry of the Universidad Javeriana in Bogotá, Colombia, reviews the moral and juridical basis for the use of medical and dental hypnotic techniques and compares their acceptability with that of chemoanesthesia. Review is then given of the applications of the theories and techniques of hypnosis in dentistry. (P.S.)

128. Morey Hossri, C. Hipnose, emocoes e reacoes leucocitarias. [Hypnosis, emotions, and reactions in the white cell count.] *Rev. Latino-Amer. Hipn. clín.*, 1960, **1** (3), 35-36.

Six healthy subjects were examined, and a white cell count was taken in the waking state. Suggestions were given in a 20-minute hypnotic trance state to provoke emotional tension, after which the white count was repeated. Later, after a second hypnotic experience during which calm and serenity were suggested, the white count was again repeated. Significant changes in the white count were found in most of the 6 cases. (P.S.)

129. Gubel, I. Técnicas analíticas en hipnosis. [Analytical techniques in hypnosis.] *Rev. Latino-Amer. Hipn. clín.*, 1960, **1** (3), 13-14.

Modern use of hypnosis in psychiatry requires a freedom from restricted and rigid psychiatric schools whether they be psychoanalytical or Pavlovian. Hypnotherapy in the psychological field requires a freedom of action on the part of the physician and his ability to overcome any preconceived limitations. (P.S.)

130. Draguelesco C., Paul. El aborto espontaneo emocional: psicopatología y psicodinamia. [Spontaneous miscarriage of emotional origin: psychopathology and psychodynamics.] *Rev. Latino-Amer. Hipn. clín.*, 1960, 1 (2), 17-20.

A clinical history is reported of three consecutive abortions with no known organic cause, but with a traumatic history of the witnessing of a difficult labor of a relative and of being terrified by morbid accounts of death from childbirth. Discovery of the emotional background and employment of superficial psychotherapy resulted in the completion of a full-term pregnancy and a second pregnancy, offering promise at the fifth month of being successful. The possible physiological effects of intense emotion are discussed. (P.S.)

131. Rillo, Carlos A. Hipnosis y síndrome simpático temporo-mandibular. [Hypnosis and the sympathetic temporo-mandibular syndrome.] *Rev. Latino-Amer. Hipn. clín.*, 1960, 1 (2), 21-22.

The sympathetic temporo-mandibular syndrome, whether with or without recognizable anatomical alteration, is a familiar orthodontic and otological functional disturbance. While treatment requires orthodontic care, hypnosis is most useful in correcting associated psychosomatic symptomatology and in facilitating the anatomical readjustments. (P.S.)

132. Barretto, Alberto L. Sugestiones nocturnas para corregir los malos hábitos infantiles. [Nocturnal suggestions used to correct bad habits in children.] *Rev. Latino-Amer. Hipn. clín.*, 1960, 1 (2), 29-32.

The article discusses a method of nocturnal suggestions (during sleep) as a simple and effective method for the correction of bad habits in children (enuresis, nail biting, finger sucking, excessive use of candies, poor appetite, etc.) (P.S.)

133. Balart, Eduardo. Rinoplastia bajo hipnosis. [Rhinoplastic operation under hypnosis.] *Rev. Latino-Amer. Hipn. clín.*, 1960, 1 (2), 15-16.

Detailed description is given of the hypnotic preparation of a medical student for septal surgery. Various techniques for training were employed to insure results. On the operative day the patient was pseudo-oriented to a previous date, negative hallucinations were induced for the operative situation, and he was given the opportunity to perceive the surgeons work as an examination. The procedure was successful, a small amount of local anesthetic was used for periosteal pain, and the post-operative recovery was unusually comfortable. (P.S.)

134. Sutermeister, Hans. Autohipnosis del espectador cinematográfico. [Autohypnosis of the spectator who is watching a movie.] *Rev. Latino-Amer. Hipn. clín.*, 1960, 1, 23-24.

A parallel is drawn between the psychological and physiological states of the person intently absorbed in watching a movie and those of a person in autohypnosis. (P.S.)

135. de Rosemblit, Bluma G. Sobre un caso de enuresis. [About a case of enuresis.] *Rev. Latino-Amer. Hipn. clín.*, 1960, 1 (2), 25-26.

Enuresis, almost always of psychological origin, is aggravated by emotional tensions attendant upon the problem, and which derive from the total life situation. Such a clinical case is reported, together with its successful therapy under hypnosis. (P.S.)

136. Schultz, J. Entrenamiento autógeno. [Autogenic training.] *Rev. Latino-Amer. Hipn. clín.*, 1960, 1 (2), 34-35.

The origin of autogenic training lay in the discovery in 1920 that relaxation of the muscles and of the blood vessels was a regular accompaniment of hypnosis. First mention was made at the Berlin Medical Association in 1926, and the author's first book appeared in 1932. The proper technique consists of six periods of two weeks each, during which the subject is taught first muscular relaxation, then blood vessel relaxation, then in order, exercises for the heart, the respiration, the abdomen, and finally the cephalic region. A teacher is necessary, but large groups can be trained at the same time. Autogenic training has all the advantages of hypnosis

without the possible risk of transference and is well known in Europe, since probably more than 15,000 people have been trained in Germany alone. (P.S.)

137. Verson, R. D. Importancia de la fraseologia en la hipnosis. [Importance of phraseology in hypnosis.] *Rev. Latino-Amer. Hipn. clín.*, 1960, **1** (2), 26-27.

Many of the difficulties encountered in the use of hypnosis are probably due to the improper use of words. It is important that our words be used in accord with the patient's understandings. In one example, the patient was told in deep trance, "Now you are going to wake up," and the subject woke up "now," without awaiting the completion of the instruction. In another case, the subject was told to put her hand in a hallucinated pot of "boiling water." Even though the suggestion was corrected immediately to "hot water," subject refused to accept the suggestion. Another patient suffered a "psychological decapitation" when told that she would feel her mind separated from her body. Induction procedures should be modified in relationship to the patient's reactions. (P.S.)

138. Solovey, G., and Milechnin, A. Conceptos actuales de la hipnosis: fenómenos hipnóticos, sugestiones, y actividad onirica. [Current concepts of hypnosis: Hypnotic phenomena, suggestions and oneiric activity.] *Rev. Latino-Amer. Hipn. clín.*, 1960, **1**, 1 and 2, 7-12.

The everyday lulling of a child by his mother is nothing else but the induction of an hypnotic emotional state of a positive kind. After a certain period of time the child passes spontaneously from the hypnotic emotional state into physiological sleep. In normal sleep of children and adults, the period of dreaming is practically equivalent, in its psychophysiological properties, to an autohypnotic state. The phenomena of the hypnotic state vary in accordance with the intensity of this state. Most of the phenomena that may be found in the deliberately induced hypnotic state of a certain intensity also appear in sleep. Under propitious circumstances the dreaming phase of sleep may be transformed into an interpersonal hypnotic relationship. Suggestion in the hypnotic state is merely a confluence of verbal and nonverbal stimuli, which, on being adequately given, reveal and channelize the preexisting psychophysiological capacities, acquired by the person in those moments as the result of an increased emotional intensity. Hypnosis is definitely more than suggestibility. (A.)

139. Wollman, L. The role of hypnosis in the treatment of infertility, *Brit. J. med. Hypnot.*, Spring 1960, II, 3.

A long historical introduction with references culled from British, French, and Russian sources is followed by representative case histories from the author's private practice. Infertility problems of tubo-spasm, dyspareunia, ejaculatio praecox, anxiety, one-cihld infertility, anovulatory cycles, pseudocyesis, and habitual abortion are discussed. Hypnosis is emphasized as an aid in therapy, and as an age-old modality that should be utilized. (A.)

140. Edwards, G. Hypnotic treatment of asthma. *Brit. med. J.*, August 13, 1960, 492-497.

Report is made of the use of hypnosis in six hospitalized asthmatic patients over a period of days. Serial ventilatory function tests were made of vital capacity and forced expiratory volume. Three methods of assessing the patient's condition were employed, his own report, thoracic auscultation, and the ventilation function tests. Conclusions were that patients could benefit from hypnosis physiologically by a decrease of air passage resistance and psychologically from a decreased awareness of air passage resistance. (Leo Wollman.)

141. Cheek, D. B. Possible uses of hypnosis in dermatology. *Med. Times*, 1961, **89** (Jan.), 76-82.

The ue of hypnosis in skin disease is outlined, and beneficial effects resulting through the reorientation of the patient to the self with concomitant beneficial changes, in addition to those psycho-neuro-physiological changes that can be suggested hypnotically to he patient are described. (M.H.E.)

BERNARD EMMANUEL GORTON, 1926-1961

The American Journal of Clinical Hypnosis announces with deep regret the decease from an acute asthmatic condition April 26, 1961, of one of its Editorial Board, Dr. Bernard E. Gorton, aged 34 years.

He was born October 27, 1926, in Vienna, Austria, and came to the United States in 1941. He graduated from the Syracuse University College of Medicine in 1951, and had been instructor in neurology and psychiatry at the University of Pennsylvania Graduate School. He held the rank of captain in the U. S. Air Force, 1953-1955, acting as chief of the Neuropsychiatric Clinic and also as electroencephalographer at the 3750th U. S. Air Force Hospital.

He had practiced psychiatry in New York, Texas, and Pennsylvania before moving to Arizona in July, 1960, where he practiced in Phoenix and made his home in Tempe.

Dr. Gorton was a member of the local medical societies and the American Medical Association, of the American Psychiatric Association and the Society for Clinical and Experimental Hypnosis and was a Fellow of the American Society of Clinical Hypnosis.

Dr. Gorton had published extensively, particularly on the physiological aspects of hypnosis and on autogenic training.

He had acted as editor of the *Newsletter* and had been a member of the Legislation Committee. At the time of his death he was a member of the Foreign Relations Committee, dealing especially with European and mid-Eastern professional contacts, a member of the Program Committee, Chairman of the Committee on Research, as well as being one of the Editors of this Journal.

Dr. Gorton leaves a widow, Mary Elizabeth, and four sons, Gary, Gregory, Christopher, and Joel, to whom the members of the Society extend sincere sympathy.

All who knew him admired, respected, and trusted him, and all expected of him an endless succession of significant accomplishments.

NOTICE OF
FOURTH ANNUAL MEETING

The Fourth Annual Meeting of the American Society of Clinical Hypnosis is to be held in St. Louis at the Chase-Park Plaza Hotel on **October 27, 28, 29, 1961.**

The Program Committee has worked diligently to prepare a stimulating and well-balanced program of formal papers, symposia, and question-and-answer panels. Expected highlights are: papers by foreign scientists, papers on EEG, experimental hypnosis, a recorded demonstration of techniques employed in obstetrics, an exploration of the role-taking theory in hypnosis, investigating the unconscious by use of ideomotor techniques, and numerous clinical topics.

Preceding the Annual Meetings, on October 25 and 26, we are conducting a two-day advanced teaching program. This is the first time that our Society has sponsored a teaching program, and all efforts will be made to insure its success.

A carefully planned schedule of entertainment and activities for participants' wives is also something to be anticipated pleasurably.

Our meetings are open to all interested persons, with a nominal registration fee for non-members. There is no registration fee for members of the Society.

Acta Hipnologica Latinoamericana

Revista de publicación trimestral

●

Organo Oficial de la

CONFEDERACION LATINOAMERICANA DE HIPNOSIS CLINICA Y EXPERIMENTAL

Dirección: Aráoz 2689 - 6° C - Buenos Aires (Argentina)

●

Tarifas:

ARGENTINA:

Suscripcion anual (4 numeros)..	" 300.—m/n.
Numero suelto (actual).....	" 90.—m/n.
Numeros atrasados (c/u.).....	" 120.—m/n.

OTROS PAISES:

Suscripcion anual (4 numeros).....	U$S 6.—
Numero suelto (actual).....	" 2.—
Numeros atrasados (c/u.).....	" 3.—

Cheques y giros a la orden del

Secretario General Dr. Everado Power
America 111 - V. Ballester
Buenos Aires (Argentina)

Los miembros de la Sociedad Argentina de Hipnosis Médica e Hipnoanálisis*, editora de la Revista, al día con sus cuotas societarias, tienen derecho a su recepción sin cargo. Puede hacerse extensivo este beneficio a otras sociedades hipnológicas argentinas y latinoamericanes previo convenio especial.

Los miembros de las sociedades confederadas pueden beneficiarse con una bonificación en las tarifas en dólares USA previo acuerdo especial, por medio de suscripciones globales de cada sociedad.

(*) Según el Art. 6° de sus Estatutes podrá ser miembro adherente de esta Sociedad, todo médico residente en el territorio argentino que, a su solicitud, sea aceptado por la Comisión Directiva.

INSTRUCTIONS TO CONTRIBUTORS

Typescripts, double-spaced throughout, should be submitted to the Editor, 32 West Cypress St., Phoenix, Arizona, and should conform to the style of the Journal. Carbon copies are not acceptable. Some important features of the style are covered in the following instructions.

1. References should be listed at the end of articles, and items in the list should be referred to in the text by means of numbers in parentheses. The forms of citation for a book and an article are:

Weitzenhoffer, A. M. *General techniques of hypnotism.* New York: Grune & Stratton, 1957.

Davis, L. W., and Husband, R. W. A study of hypnotic susceptibility in relation to personality traits. *J. abn. soc. Psychol.,* 1931, **26**, 175-182.

The first and last pages of articles should be indicated. The number of a periodical should be indicated only if the pagination is not continuous through the volume (e.g., *Brit. J. med. Hypnot.,* 1952, **3**, No. 4, 5-9.)

2. The use of footnotes should be minimized.

3. Italic type should not be used for emphasis except very sparingly. A key word or phrase may be italicized early in a paragraph in lieu of a heading of the paragraph.

4. Indent the first line of every paragraph. Type all of a manuscript to the same uniform left-hand margin except for the paragraph indentations.

5. The abbreviations of the titles of journals used follow the rules laid down in the *World List of Scientific Periodicals.* Nouns are capitalized and adjectives are not. Articles and connecting words are omitted. Titles consisting of single words are not abbreviated.

Abstracts should be non-critical.

Printed by Roberts Printing Company, Frankfort, Kentucky